



## State of New Jersey

CHRIS CHRISTIE  
*Governor*

DEPARTMENT OF ENVIRONMENTAL PROTECTION  
Mail Code – 401-02B  
Water Pollution Management Element  
Bureau of Surface Water Permitting  
P.O. Box 420  
Trenton, NJ 08625-0420  
Phone: (609) 292-4860

BOB MARTIN  
*Commissioner*

KIM GUADAGNO  
*Lt. Governor*

**CERTIFIED MAIL**  
**RETURN RECEIPT REQUESTED**

7010 1870 0001 4760 7838  
June 17, 2013

James Maiz, Senior Vice President  
RC Cape May Holdings LLC  
900 N Shore Rd  
Beesleys Point, NJ 08223

Re: Final Consolidated Renewal Permit Action  
Categories: B -Industrial Wastewater  
RF -Stormwater  
NJPDES Permit No. NJ0005444  
B L ENGLAND GENERATING STATION  
Upper Twp, Cape May County

Dear Mr. Maiz:

Enclosed is a **final** New Jersey Pollutant Discharge Elimination System (NJPDES) permit action identified above which has been issued in accordance with N.J.A.C. 7:14A. This permit action authorizes discharge activities applicable to the Industrial Wastewater and Stormwater categories. The permit authorizes the intake of Great Egg Harbor Bay water as well as the discharge of pollutants through several outfalls to Great Egg Harbor Bay, classified as SE-1. There are several discharges from this facility including: cooling tower blowdown (DSN 001A), stormwater (DSNs 003A, 006A and 007A), intake screen backwash (DSN 008A), condenser cooling water discharges (DSNs 009A and 010A), wastewater treatment plant effluent (DSN 013A), and effluent from the flue gas desulfurization system (DSN 014A – internal point).

The draft permit proposed to authorize treated effluent from the Continuous Sequential Batch Reactor (CSBR) (DSN 015A – internal point), however, at the permittee's request the discharge of sanitary effluent from the CSBR has been removed in this final permit. Accordingly, requirements for DSN 015A in Part III are not included in this final permit. Note that removal of this internal monitoring point in the final permit is consistent with N.J.A.C. 7:14A-16.5(a)6.

In this final permit action, the following change was made from the draft permit:

- Dissolved oxygen monitoring was added on a once per month basis to DSNs 001A, 009A and 010A, as well as the intake to DSN 010A.

The Department received one set of comments from a third party on the draft action during the public comment period. A summary of these comments, the Department's responses, and an explanation of any changes from the draft action have been included in the Response to Comments document attached hereto as per N.J.A.C. 7:14A-15.16.

Any requests for an adjudicatory hearing by the third party that commented on the draft action shall be submitted in writing by certified mail, or by other means which provide verification of the date of delivery to the Department,

within 30 days of receipt of this Consolidated Renewal Permit Action in accordance with N.J.A.C. 7:14A-17.2. The adjudicatory hearing request must be accompanied by a completed Adjudicatory Hearing Request Form.

As per N.J.A.C. 7:14A-4.2(e)3, any person planning to continue discharging after the expiration date of an existing NJPDES permit shall file an application for renewal at least 180 calendar days prior to the expiration of the existing permit.

All monitoring shall be conducted in accordance with 1) the Department's "Field Sampling Procedures Manual" applicable at the time of sampling (N.J.A.C. 7:14A-6.5(b)4), and/or 2) the method approved by the Department in Part IV of the permit. The Field Sampling Procedures Manual is available at <http://www.nj.gov/dep/srp/guidance/fspm/>.

As a result of this permit action, your monitoring report forms have been changed. Enclosed with this permit are the new monitoring report forms (MRFs). Beginning the effective date of the permit, please use the new MRFs. Questions regarding the new forms shall be directed to this Bureau for further clarification.

For your convenience, a schedule of submittal requirements has been included with this permit package.

Questions or comments regarding the final action should be addressed to Heather Genievich at (609) 292-4860.

Sincerely,

A handwritten signature in black ink, appearing to read "Pilar Patterson", is shown within a light gray rectangular box.

Pilar Patterson, Chief  
Bureau of Surface Water Permitting

Enclosures

cc: Permit Distribution List

Masterfile #: 267113; PI #: 46087

# FACILITY SUBMITTALS

## 1. GDR - General Discharge Requirements

Task Description	Actual Due Date
Submit a Complete Permit Renewal Application	02/01/2018

## 2. B - Industrial Wastewater

Task Description	Actual Due Date
Submit an Acute Whole Effluent Toxicity Test Report	08/26/2014
Submit an Acute Whole Effluent Toxicity Test Report	08/26/2015
Submit an Acute Whole Effluent Toxicity Test Report	08/26/2016
Submit an Acute Whole Effluent Toxicity Test Report	08/26/2017

## 3. RF - Stormwater

Task Description	Actual Due Date
Annual Report	09/01/2014
Submit the Generic Certification Form Certifying That The Annual Inspection Was Conducted	09/01/2014
Submit the SPPP	02/01/2015
Annual Report	09/01/2015
Submit the Generic Certification Form Certifying That The Annual Inspection Was Conducted	09/01/2015
Annual Report	09/01/2016
Submit the Generic Certification Form Certifying That The Annual Inspection Was Conducted	09/01/2016
Annual Report	09/01/2017
Submit the Generic Certification Form Certifying That The Annual Inspection Was Conducted	09/01/2017

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- 4. Response to Comments**
- 5. NJPDES Permit Authorization Page**
- 6. Part I – General Requirements: NJPDES**
- 7. Part II – General Requirements: Discharge Categories**
- 8. Part III – Limits and Monitoring Requirements**
- 9. Part IV – Specific Requirements: Narrative**
- 10. Attachment 1 – Contents of the Stormwater Pollution Prevention Plan**

New Jersey Department of Environmental Protection  
Division of Water Quality  
Bureau of Surface Water Permitting

**RESPONSE TO COMMENTS**

Comments were received on the New Jersey Pollutant Discharge Elimination System (NJPDES) draft Surface Water Renewal Permit Action No. NJ0005444 issued on March 28, 2013. The comment period began on March 26, 2013 and the Public Notice was published in the *Press of Atlantic City* as well as the DEP Bulletin. The public comment period ended on April 29, 2013.

The Department received the following submission:

1. Reed W. Super and Edan Rotenberg of Super Law Group, LLC with Aaron Kleinbaum and Alice R. Baker of Eastern Environmental Law Center in a letter and e-mails dated April 26, 2013. These two law groups submitted comments in one document on behalf of the Sierra Club, American Littoral Society, New Jersey Environmental Federation, and Clean Ocean Action.

A summary of the timely and significant comments received, the New Jersey Department of Environmental Protection's (NJDEP) responses to these comments, and an explanation of any changes from the draft action have been included below.

**Comment 1**

Section 316(b) of the Clean Water Act (the Act) requires that the "location, design, construction, and capacity of cooling water intake structures reflect the best technology available (BTA) for minimizing adverse environmental impact." The adverse environmental impacts of B.L. England's once-through cooling system are significant where the Act requires that these impacts be minimized through this NJPDES permit renewal, not at some indefinite future point. Yet the NJDEP avoids making any real decisions or requiring any serious improvements to the cooling water system.

In the Draft Permit the NJDEP concludes that B.L. England will minimize the adverse environmental impact of its cooling water system by submitting a study that analyzes the feasibility of reducing impingement mortality through improved screens with fish buckets and an improved fish return system. This is very far from the kind of determination about the BTA required by federal law. This "BTA Determination" does not discuss or address entrainment at all, nor does it require B.L. England to take any action that might actually reduce the number of fish killed. NJDEP should have considered a range of options that address both impingement and entrainment, and then determined which technology is the best available for minimizing the adverse environmental impacts of B.L. England's cooling water system. Then, NJDEP should require that this technology be installed as soon as reasonably possible.

The best technology to address B.L. England's fish kills and thermal pollution is a closed-cycle cooling system like the one that is in use at Unit 3. Using the upcoming repowering as a chance to install a closed-cycle cooling system for the balance of the plant will reduce B.L. England's water withdrawals and environmental impacts by 90%, at a cost which is not wholly disproportionate to the benefits, and without disrupting B.L. England's electricity generating operations. Hence, it is an available technology.

## **Response 1**

The Department disagrees with the commentor's assertion that the Section 316(b) determination is inconsistent with federal law. While the commentor is correct in that NJDEP is requiring a study of improvements to the screen system and fish return to minimize impingement effects, NJDEP did not limit its Section 316(b) decision to impingement reductions alone. The cornerstone of the 2013 draft permit is the fact that the repowered facility will withdraw lesser volumes of water. As noted on page 1 of the 2013 Fact Sheet:

... The permittee is proposing major changes to the Station that will result in environmental benefits in the vicinity of the Station and to the receiving waterbody due to reductions in intake volume, discharge volume, and air emissions.

Further, on page 20:

...The Department contends that it is reasonable to assume that a reduction in water withdrawal will have a directly proportional reduction in impingement and entrainment mortality. As a result, the reduction in flow after repowering of approximately 43% will have a significant reduction in impingement and entrainment mortalities.

By way of background, Section 316(b) of the 1972 Clean Water Act regulates cooling water intake structures and their effects and states that:

Any standards established pursuant to section 301 or section 306 of this Act and applicable to a point source shall require that the location, design, construction, and capacity of cooling water intake structures reflect the BTA for minimizing adverse environmental impact.

The construction of BL England predates the enactment of the Clean Water Act since Units 1 and 2 came on line in 1961 and 1962, respectively, and Unit 3 came on line in 1964. Although the Clean Water Act was issued in 1972, final EPA regulations for existing plants such as BLE are still not in effect but are due to be finalized by June 27, 2013

(<http://water.epa.gov/lawsregs/lawsguidance/cwa/316b/>). In the interim, states are required to issue Section 316(b) determinations in accordance with Best Professional Judgment (BPJ). Because the required analysis for a BTA determination is not currently set forth in regulation, states and permitting authorities must glean information from the procedural history and draft regulation that came after the Clean Water Act Statute. In sum, NJDEP maintains that this BTA determination is legally appropriate and considers the necessary elements.

## Comment 2

NJDEP's BTA determination process was compromised by NJDEP's failure to demand information about cooling towers. B.L. England was required to submit a Proposal for Information Collection (PIC) in 2005 and a Comprehensive Demonstration Study (CDS - also called a "316(b) Report") in 2008, as per the then effective federal rules. However, the PIC excluded all consideration of cooling towers from the analysis and instead examined a set of ten technology options that involved various modifications to the existing screens, the fish return system, relocation of the intake, or addition of a net barrier. While none of these technologies approach the impingement and entrainment reductions achievable through closed-cycle cooling, the NJDEP accepted this deficient PIC.

Between 2005 and the proposed submission of a 316(b) Report in 2008, EPA withdrew its Phase II regulations in light of a ruling from the Second Circuit Court of Appeals. Given the change in regulatory background, NJDEP sent a letter to the permittee in December 2007 and stated that any renewal application must contain a complete analysis of the suite of intake protection technologies that are available to address impingement and entrainment by June 30, 2008. Given that B.L. England already operates one natural draft cooling tower, it is indisputable that cooling towers must be considered as part of a complete analysis. But NJDEP made no effort to correct the gap in the record. Instead, in its 2007 letter, NJDEP actually *waived* a requirement that the forthcoming CDS should include "technology and compliance assessment information" and "information to support site-specific determination of BTA for minimizing adverse environmental impact." The February 2008 316(b) Report did not include any analysis of closed-cycle cooling, nor did the permittee's 2009 permit renewal application.

After receiving the 316(b) Report in 2008 and the renewal permit application in 2009, NJDEP took another four years to issue this Draft Permit. This extended delay provided NJDEP ample time to correct the deficient record in its possession.

## Response 2

To properly understand the timeline of events, it is important to provide information detailing the involvement of the EPA Section 316(b) regulations and then compare the Section 316(b) reports from the permittee against that timeline. EPA issued final regulations for Phase II facilities effective September 7, 2004 to guide implementation of the Section 316(b) statute under the 1972 Clean Water Act. These Phase II regulations were specific to power generating facilities that met certain eligibility criteria such as B.L. England. As noted in this comment, the Section 316(b) Phase II regulations required submission of a PIC followed by a CDS. The PIC is essentially a workplan to describe what data will be collected for the purposes of the CDS. The Phase II rule stated that the CDS must be submitted by January 7, 2008 as specified at 40 CFR Part 125.95(a)(2)(ii).

The Phase II regulations were appealed by multiple parties. In Riverkeeper, Inc., v. EPA, No. 04-6692, (2d Cir. January 25, 2007) the Second U.S. Circuit Court of Appeals issued its decision

in the litigation over the Phase II regulation. The court's decision remanded several provisions of the Rule on various grounds including, but not limited to the following:

- EPA's determination of the BTA under section 316(b);
- The Rule's performance standard ranges;
- The Cost-cost and cost-benefit compliance alternatives;
- The Technology Installation and Operation Plan provision and;
- The restoration provisions.

EPA then suspended the Phase II Section 316(b) regulations as articulated in the July 9, 2007 Federal Register. EPA directed States and permitting authorities to issue permits in accordance with BPJ pursuant to 40 CFR 401.14 until the final rule is released which is expected on June 27, 2013.

With respect to the Administrative Record for BL England, NJDEP issued a final renewal permit on January 11, 2005. Because the Phase II regulations were then in effect, the renewal permit required submission of a PIC and a CDS. The necessary elements of the PIC as described in the EPA Rule at 40 CFR 125.95(b)(1) (now remanded) were as follows:

- (1) Proposal For Information Collection. You must submit to the Director for review and comment a description of the information you will use to support your Study. The Proposal for Information must be submitted prior to the start of information collection activities, but you may initiate such activities prior to receiving comment from the Director. The proposal must include:
  - (i) A description of the proposed and/or implemented technologies, operational measures, and/or restoration measures to be evaluated in the Study;
  - (ii) A list and description of any historical studies characterizing impingement mortality and entrainment and/or the physical and biological conditions in the vicinity of the cooling water intake structures and their relevance to this proposed Study. If you propose to use existing data, you must demonstrate the extent to which the data are representative of current conditions and that the data were collected using appropriate quality assurance/quality control procedures;
  - (iii) A summary of any past or ongoing consultations with appropriate Federal, State, and Tribal fish and wildlife agencies that are relevant to this Study and a copy of written comments received as a result of such consultations; and
  - (iv) A sampling plan for any new field studies you propose to conduct in order to ensure that you have sufficient data to develop a scientifically valid estimate of impingement mortality and entrainment at your site. The sampling plan must document all methods and quality assurance/quality control procedures for sampling and data analysis. The sampling and data analysis methods you propose must be appropriate for a quantitative survey and include consideration of the methods used in other studies performed in the

source waterbody. The sampling plan must include a description of the study area (including the area of influent of the cooling water intake structure(s)), and provide a taxonomic identification of the sampled or evaluated biological assemblages (including all life stages of fish and shellfish).

As noted by the commentor, BL England specified in its PIC that closed cycle cooling was already in place for Unit 3 but also provided a list of ten design and construction technologies for the once through cooling system as per 40 CFR 125.95(b)(1)(i) above. However, the objective of the PIC is to describe what studies will be evaluated and does not specify that certain intake protection technologies, such as closed cycle cooling, must be evaluated. On January 4, 2006, the NJDEP approved the PIC as it was consistent with the scope of the rule at 40 CFR 125.95(b)(1)(i) and addressed all necessary components. In sum, NJDEP found the PIC to be fully compliant with the then effective Phase II Section 316(b) regulations.

Based on the remand of the Phase II Section 316(b) regulations, EPA directed states and permitting authorities to proceed at their discretion with respect to the CDS requirements. The NJDEP carefully considered the court decision and affected sections of the rule in determining what was useful and appropriate within the context of the CDS for all affected facilities. As a result, the NJDEP determined that the Source Waterbody Flow Information and the Impingement Mortality and/or Entrainment Characterization Study (40 CFR 125.95(b)(2) through (3)) were still appropriate and required to be submitted. However, given the remand of the Phase II rule and uncertainty as to any future study requirements, NJDEP waived the study requirements for technology and compliance assessment information; a restoration plan; information to support site-specific determination of BTA (BTA) for minimizing adverse environmental impact and a verification monitoring plan. Specifically, compliance assessment information was no longer appropriate as the numerical standards for impingement and entrainment were remanded. This determination was appropriate given the Second Circuit Court's position on the technology and restoration portion of the rule and was within NJDEP's authority at 40 CFR 401.14.

NJDEP disagrees with the commentor's assertion that the 2009 permit renewal application did not contain the necessary Section 316(b) information. Rather, the 2009 renewal application referred to the voluminous 2008 CDS study which contained an analysis of intake protection technologies despite the uncertainty associated with the pending Section 316(b) rule. Upon renewal of the permit in 2013, NJDEP utilized the information available which had been updated to include the repowering scenario. In preparing the renewal permit, NJDEP determined that operation of the existing cooling tower as well as the significant reduction in water withdrawals would significantly reduce impingement and entrainment losses. It is NJDEP's position that this flow reduction is more stringent than the requirements of the proposed rule as described further in **Response 5**. In addition, NJDEP determined that the suite of intake protection technologies evaluated was sufficient given the site-specific information regarding the plant and the language contained in the pending EPA rule.

### **Comment 3**

B.L. England's cooling water intakes have significant adverse impacts that include killing

billions of organisms per year. To quantify impingement and entrainment, B.L. England's owners conducted impingement and entrainment mortality studies in 1998-1999 and again in 2005-06, using similar methodologies each time. In 1988-89, sampling found 80 species impinged and 134 species entrained. In 2005-06, at least 60 species were impinged and 132 species entrained. The mean annual density of organisms impinged and entrained was nearly constant across time. However, the total number of organisms killed dropped by about a third in recent data, from around 3 billion organisms in 1988-89 (3.05 billion), down to around 2 billion organisms (1.92 billion) in 2005-06. But since the density of entrained organisms did not change more than a fraction of a percent, the difference in the number of organisms killed can only be attributable to a reduced intake flow used in extrapolating the 2005-06 sampling out to annual numbers.

For the next few years, the plant's design intake flow will remain 294.3 MGD. After repowering, B.L. England will continue to withdraw 167.6 MGD of cooling water unless NJDEP requires a move to closed-cycle cooling. Since there are no enforceable flow or generating capacity limitations written into the Draft Permit, NJDEP's BTA determination must be based on avoiding the harm that would occur at these design flows. Even at a flow of 167.6 MGD, B.L. England will withdraw 600,000 cubic meters of water from Great Egg Harbor Bay daily, or more than 231 million cubic meters of water every year resulting in the killing of billions of organisms a year.

### **Response 3**

Repowering this existing facility will result in the operation of two units - one with a cooling tower and the other at significantly reduced water withdrawal volumes. NJDEP maintains that these technologies will significantly reduce impingement and entrainment losses and that these reductions are in line with the proposed EPA 316(b) rule as described in **Responses 1 and 2**.

NJDEP recognizes that there are impacts resulting from cooling water intakes. The Draft 2013 permit contains numerous charts and information regarding historical and current impingement and entrainment data. As noted by the commentor, aquatic organisms are present at certain densities in intake water. By reducing the amount of water withdrawn, there is a commensurate reduction in impingement and entrainment losses as described in **Response 1**. Entrainment impacts are linked to the amount of water passing through the intake structure because the eggs and larvae of some aquatic species are free-floating and may be drawn with the flow of cooling water into an intake structure. Impingement impacts are also related to intake flow since swim speeds of affected species as well as intake velocity are factors in predicting rates of impingement based on the ability of juvenile and adult life stages of species to avoid impingement. The Section 316(b) statute requires that these impacts be minimized through intake protection technologies. NJDEP maintains that the most effective way to reduce impingement and entrainment is through a reduction in water withdrawal.

While the commentor is correct in that this permit does not specify flow limits, this permit does require monitoring of intake flow volume.

#### Comment 4

NJDEP's failure to consider the use of cooling towers at B.L. England is arbitrary, capricious, unreasonable, and violates the express requirement of Section 316(b). First, the absence of any cooling tower analysis is inconsistent with NJDEP's recent BTA determination process at other power plants. NJDEP changed its practice for B.L. England without explanation and did not look at whether cooling towers are technically or economically feasible. Second, the failure to consider closed-cycle cooling contradicts the approach laid out in the draft 1977 EPA guidance document that NJDEP claims to rely upon in making BTA determinations such as in the 2005 B.L. England renewal permit. In the 1977 EPA guidance document, EPA stated that closed-cycle cooling is not the inevitable outcome of every BPJ-based BTA determination, but rather the appropriate technology is best determined after a careful evaluation of the specific aspects at each site. As noted in the 1977 EPA guidance document:

Where environmental impact from entrainment must be minimized *reliance must be placed primarily on flow reduction* and intake relocation as remedial measures: Reducing cooling water flow is generally an effective means for minimizing potential entrainment impact. In fact, *this may be the only feasible means to reduce impact of entrainment* . . . Reduction of flow is accomplished primarily by an increase in condenser temperature rise or through recirculating cooling systems.

In its 2005 Fact Sheet NJDEP characterized the B.L. England intake as being located in a shallow estuarine environment. NJDEP has stated in other permit actions that these environments tend to have greater ecological impacts since these areas are usually more biologically productive. As per the above EPA document, this is the type of scenario in which entrainment must be minimized and cooling towers must be considered. Further, the need to evaluate the use of cooling towers in connection with this repowering is all the more obvious at a site like B.L. England since one natural draft cooling tower has already been in use for decades, proving that cooling tower technology is available and feasible at this site.

Finally, NJDEP's failure to consider the use of a cooling tower for the new Unit 4 contradicts EPA's latest guidance on BTA Determinations namely the 2011 proposed regulation. While NJDEP refers to these draft regulations in the process of reaching its BPJ based BTA Determination, NJDEP missed the fact that it would be required to evaluate the use of cooling towers at every existing facility in the state as per 40 C.F.R. § 122.21(r)(10)(i)(A).

#### Response 4

With respect to the claim that the BTA analysis is inappropriate, NJDEP maintains that it included a site-specific BTA determination in the Draft 2013 permit that is consistent with Section 316(b) as described in **Response 1**. To further elaborate, NJDEP is not requiring the facility to install cooling towers for Unit 4 for the following site-specific reasons:

- BL England already operates a closed cycle cooling system at Unit 3.

- B.L. England is significantly reducing its water withdrawal for once-through cooling by 43% with a commensurate reduction in impingement and entrainment;
- There is no final EPA regulation requiring cooling towers at existing facilities.
- The proposed EPA regulation requires “study” of entrainment controls which could include closed-cycle cooling for plants that have an actual intake flow of 125 MGD.

Most importantly, NJDEP does not agree that the Section 316(b) statute requires NJDEP to require closed cycle cooling nor does NJDEP agree that the final regulation will mandate closed cycle cooling for existing facilities. As stated on page 22207 of the April 20, 2011 Federal Register for the proposed Section 316(b) regulation:

...EPA has determined that closed cycle cooling is not the “BTA” for this proposal. After considering all of the relevant factors, EPA proposes that it should not establish a uniform BTA entrainment standard based on closed-cycle cooling for existing facilities other than for new units. Instead...EPA is proposing that the permitting authority should establish BTA entrainment mortality controls on a site-specific basis..

As stated on page 22283 of the proposed rule:

**§125.93 (c) *BTA standards for entrainment mortality for existing facilities.*** The Director must establish BTA standards for entrainment mortality on a case-by case basis. These standards must reflect the Director’s determination of the maximum reduction in entrainment mortality warranted after consideration of all factors relevant for determining the BTA at each facility, including the factors specified in § 125.98.

And on page 22288 of the proposed rule:

**§ 125.98 (e) *Site-specific entrainment mortality controls.*** The Director must establish case-by-case BTA standards for entrainment mortality for any facility subject to such requirements after reviewing the information submitted under 40 CFR 122.21(r) and § 125.95...The Director may reject an otherwise available technology as BTA standards for entrainment mortality if the social costs of compliance are not justified by the social benefits... If all technologies considered have social costs not justified by the social benefit, or have unacceptable adverse impacts that cannot be mitigated, the Director may determine that no additional control requirements are necessary beyond what the facility is already doing.

In sum, NJDEP maintains that the Section 316(b) determination is legally appropriate. Please refer to **Response 6** for a more detailed discussion of BTA analysis at other NJ power plants and site-specific considerations.

Regarding use of the 1977 EPA guidance document in NJDEP’s BPJ determination, NJDEP maintains that more recent documents are more relevant to the current NJPDES renewal. For example, it is more appropriate to look to the 2011 proposed rule as an indicator of the requirements of the 2013 final rule in developing the BL England permit conditions.

Nevertheless, contrary to the commentor's contention, NJDEP maintains that the 1977 guidance document excerpt quoted here is consistent with the 2013 permit determination since the 1977 guidance document points to the benefits of flow reduction technology which is the cornerstone of the 2013 draft NJPDES decision.

With respect to the third part of this comment, NJDEP agrees that estuaries are biologically productive and that entrainment effects must be minimized. This further supports the approach of reducing water withdrawals as BL England is proposing to do under repowered plant conditions.

Finally, NJDEP agrees with the contention that EPA's proposed text at 40 C.F.R. § 122.21(r)(10)(i)(A) requires consideration of cooling towers where all eligible New Jersey facilities, including B.L. England, will be required to comply with the proposed rule requirements upon finalization. This text reads as follows:

The owner or operator of the facility must submit an engineering study of the technical feasibility and incremental costs of candidate entrainment mortality control technologies. . . . At a minimum, the owner or operator of the facility must conduct a study to evaluate the technical feasibility of closed-cycle recirculating systems (cooling towers). . . .

However, note that this is a proposed rule that sets forth these study requirements. The rule must be finalized before the permittee is required to comply with the conditions of the rule. It would not be appropriate for NJDEP to pre-judge the outcome of a study for which the requirements have not yet been finalized and therefore technically not even yet required.

## **Comment 5**

A proper BPJ analysis of closed-cycle cooling towers would have found it to be the BTA. In the 2006 NJPDES permit for the PSEG Mercer power plant, NJDEP concluded that "closed cycle cooling is considered by NJDEP to be the best technology" for protecting fish at intakes, and the question remaining for NJDEP henceforth would be whether the technology is "available" at a particular site. No other technology approaches the environmental effectiveness of closed-cycle cooling. In its Technical Development Document for the proposed rule, EPA has looked at every technology from strobe lights and bubble curtains to wedgewire screens, but found many of them to be of questionable effectiveness and feasibility. Of those technologies that EPA selected for further study, it found that the next most effective technologies to closed-cycle cooling only reduce mortality from impingement, but can do little or nothing to reduce entrainment of early life stage organisms such as free floating larvae and eggs. Without reducing intake volume, EPA estimates that, on average, the next best alternatives to closed-cycle cooling can only reduce fish kills by about 31%.

NJDEP argues that a 43% reduction in cooling water intake caused by the shutdown of Unit 1 is a significant gain. NJDEP has not explained why a 43% reduction is acceptable and consistent with use of the BTA when a 90% reduction is readily achievable through closed-cycle cooling.

## Response 5

NJDEP agrees that there are limited technologies to address entrainment. The best way to address entrainment is through flow reduction as described in **Response 1**. An important consideration in NJDEP's determination for BL England is the fact that impingement and entrainment reductions will be realized as soon as 2016. Specifically, Unit 3 will continue to operate with closed cycle cooling. Unit 4 will operate at a 43% reduction as compared to the current once-through cooling system. In comparison, the proposed rule at 122.21(r)(2) through (12) requires the study and submission of numerous application components including the following:

- Source water physical data
- Cooling water intake structure data
- Source water baseline biological characterization data
- Cooling water system data
- Proposed impingement mortality reduction plan
- Performance studies
- Operational status
- Entrainment characterization study (peer reviewed)
- Comprehensive technical feasibility and cost evaluation study
- Benefits valuation study
- Non-water quality and other environmental impacts study

The range of due dates for these inherently complex study components ranges from 3 years to 7.5 years from the finalization of the rule. It is possible that applicants will conclude that additional entrainment reduction technologies are not justified. These studies will then need to be reviewed and evaluated by the permitting agency and could result in additional entrainment reduction technologies where a compliance schedule could be required. In contrast, the entrainment reduction benefits at BL England based on the water withdrawal reductions will be realized as soon as 2016.

It is important to note that NJDEP has included requirements to ensure that impingement benefits are realized sooner than the rule. As noted in this comment and in the March 28, 2011 EPA Technical Development Document that was prepared as part of the rule, the benefits of modified Ristroph traveling screens are well proven. NJDEP agrees that modified Ristroph screens are beneficial as noted in the 2013 draft permit:

The Department has repeatedly gone on record through its comments on EPA's rule making effort as well as through individual permit actions that Ristroph traveling screens are a proven and effective technology to minimize impingement mortality. Constant rotation and screen washes serve to reduce impingement mortality by assisting organisms into the fish return system, which should discharge below the tide level. Modified Ristroph traveling screens are particularly effective in reducing impingement mortality for blue crab, a species which has the highest impingement rate at BLE.

Yet while modified Ristroph screens are a proven and effective technology, EPA has stated that technologies used to meet the impingement requirements of the final rule upon adoption would have to be implemented as soon as possible but within eight years at the latest. In contrast, NJDEP is requiring an expedited schedule for study of impingement screens. As stated in the 2013 draft permit:

The permittee shall submit the Impingement Alternatives Analysis on or before EDP + 15 months. The permittee shall submit these technical findings to the Department as indicated in Part IV. Upon receipt of this information, the Department will evaluate the findings in concert with the final EPA regulations and will reopen the permit to incorporate permit conditions pursuant to N.J.A.C. 7:14A-16.4.

In sum, NJDEP maintains that its 2013 draft permit determination addresses both impingement and entrainment in a proactive manner.

#### **Comment 6**

NJDEP has already determined that closed-cycle cooling is the BTA at the Oyster Creek power station. Although Oyster Creek is a larger power station (645 MW) that withdraws almost twice the amount of cooling water, it is also located in an estuary on the New Jersey Shore. And based on sampling conducted from 2005 to 2007, entrainment at Oyster Creek appears to be *lower* than at B.L. England. At Oyster Creek, NJDEP evaluated a wide array of alternative control technologies and determined that BTA for the facility was closed-cycle cooling. NJDEP focused on the fact that closed-cycle cooling reduces water intake usage significantly, thereby decreasing impingement and entrainment effects; and is one of the few technologies able to do so.

B.L. England is substantially similar to other facilities for which EPA and other permitting agencies have required installation of closed-cycle cooling. U.S. EPA Region 1 required installation of cooling towers at the Brayton Point power plant in Fall River, Massachusetts which is also located on a shallow estuarine bay and withdraws copious amounts of cooling water. The New York Department of Environmental Conservation (NY DEC) recently deemed closed-cycle cooling to be BTA for the E.F. Barrett power station (362 MW) where the receiving water supports a finfish community similar to that in Great Egg Harbor Bay with lower levels of entrainment. NY DEC evaluated a wide array of alternative control technologies. DEC based its determination that cooling towers were BTA on several factors and noted that the technology would significantly reduce the number of eggs and larvae entrained and impinged “more than any other technology or operational measure available to reduce aquatic impacts.” NY DEC also noted the ancillary benefits in abating thermal discharge issues at E.F. Barrett.

#### **Response 6**

It is difficult to compare Section 316(b) determinations across the nation for a variety of reasons. First, there are many site-specific factors that must be taken into account in defining available intake protection technologies such as remaining useful plant life, air emissions, space

constraints, etc. Secondly, Section 316(b) determinations have occurred over time at various stages in the Section 316(b) rule evolution. Third, while some permitting agencies may be requiring closed-cycle cooling, many of these decisions were never finalized or are pending in court. NJDEP has provided background information on all of the plants cited in this comment.

With respect to NJDEP's BTA determination regarding the Oyster Creek Generating Station in Forked River, NJ, the currently effective NJPDES permit was issued in 2011 and states the following:

Pursuant to the December 9, 2010 Administrative Consent Order ("ACO"), Exelon is legally required to **Terminate Operations**, as that term is defined in the December 9, 2010 ACO, no later than **December 31, 2019**. As a direct result of this requirement, the Department has determined that **closed cycle cooling is not the BTA** given the length of time that would be required to retrofit from the existing once-through cooling system to a closed-cycle cooling system and the limited life span of the facility after implementation of the closed-cycle cooling system. The facility has physical limitations which constrain the location and types of closed-cycle cooling systems that could be installed. As stated in the January 7, 2010 draft permit, the length of time required to design, permit, and construct closed-cycle cooling technology at the facility would likely be at least seven years and would involve significant costs.

As noted above, the rationale for this decision was based on the site-specific information regarding the facility. There were also a number of other environmental impacts associated with cooling towers as cited in NJDEP's 2011 Oyster Creek determination which are as follows:

- The height and visual obtrusion of the towers
- The impingement and entrainment impacts relating to the withdrawal of water for cooling tower make-up water
- The effects of the cooling tower blowdown on marine biota and populations
- Tower vapor plume effects due to size, frequency, or trajectory, including icing and fogging effects
- Impacts to traffic visibility on nearby roads and highways
- Salt drift from the towers on the nearby community
- Noise impacts on neighbors
- Impacts of particulate emissions on air quality including potential impact on soils, vegetation and visibility.

NJDEP is also aware of the Dominion Brayton Point Power Station in Somerset, Massachusetts where US EPA Region 1 required the retrofit of the existing cooling water system with cooling towers. The Brayton Point facility is a coal-fired facility that generates a total of 1538 MW making it New England's largest fossil-fueled generating facility. However, the ultimate requirement to install cooling towers occurred after decades of technical review and eventual court action. Also, a major issue associated with the once-through system stemmed from the notable and well documented thermal impacts of the plant on the winter flounder population in Mount Hope Bay. NJDEP maintains that this is a very separate situation from BL England.

Regarding the E.F. Barrett plant in New York, please note that this decision is out in draft form. Given the intricacies and uncertainties of the pending rule, it is possible that this determination could change especially in light of finalization of the Section 316(b) regulation. This is also true of the Indian Point, Merrimack and Mirant Canal decisions by other permitting authorities.

In contrast, finalization of this permit for BL England will result in a 43% reduction in intake volume where those benefits will be realized as soon as 2016.

#### **Comment 7**

Although it has no legal obligation to do so, NJDEP typically compares the costs and benefits of different technologies in its BTA determination to ensure that the costs of the technology selected as the best available are not wholly disproportionate to the benefits gained by its implementation. In 2010, Robert Johnston, who is a professor of economics at Clark University, provided an economic analysis of the benefits of reducing impingement and entrainment. Professor Johnston explained that “[a]ll evidence indicates that economic benefits from impingement and entrainment (I&E) reductions are significant.” But he also warned NJDEP that the evidence can be difficult to collect simply by looking at conventional economic data since the economic benefits of saving fish and other organisms “are non-market economic benefits that are (1) unrelated to the direct use of affected species in markets, and (2) only measurable using non-market valuation methods capable of estimating both use and nonuse values. As a result, reliance on market data alone to estimate benefits of I&E reductions will lead to gross underestimates of total benefits.”

In the past, at power plants such as the Mercer Generating Station, NJDEP has based its wholly disproportionate analysis on deeply flawed cost-benefit studies provided by power plant owners that looked at market data for commercially fished species and zeroed-out the value of all non-commercial species of fish. Thus, NJDEP has grossly underestimated the total benefits of reducing impingement and entrainment.

This problem is not unique to New Jersey. For many years, EPA had recognized that the benefits of protecting fish, shellfish and other aquatic organisms from destruction by cooling water intake structures were significant, but had no way to quantify these benefits. So in late 2011, U.S. EPA conducted a national stated-preference study to address cost-benefit analyses for cooling water intake regulation where the initial results were released in the summer of 2012. The results of EPA’s study were clear in that the monetized benefits of closed-cycle cooling greatly exceed its costs by a large margin across the United States. EPA estimated the net present cost of different technologies for reducing impingement and entrainment of fish and compared them to the net present value that Americans are willing to pay for the environmental benefits of these technologies. The results of the comparison indicate that the net environmental benefits from modernized cooling systems will be at least \$5 - \$7 billion annually, even under a series of highly conservative and unrealistic assumptions. Other estimates conclude that the benefits are more likely in the range of \$13 to \$18 billion.

EPA's survey design was methodologically rigorous and vetted by outside experts and government economists. NJDEP should look to EPA's research and conclude that the benefits of a closed cycle cooling system are substantial and are not wholly disproportionate to the costs; thus a closed cycle cooling system is the BTA at B.L. England.

#### **Response 7**

The commentor is correct in that NJDEP has historically issued findings with respect to costs and benefits as part of its BTA determination. The "wholly disproportionate" standard originated from case law along with the precedent that NJDEP carries the burden in proving that the costs of an intake protection technology are not wholly disproportionate to the environmental benefits. See, e.g., In re Central Hudson Gas and Electric Corporation, et al., Opinion No. 63, July 29, 1977, 1977 WL 28250, \*8 (E.P.A.G.C.), In The Matter of Public Service Company Of New Hampshire, et al. (Seabrook Station, Units 1 and 2) National Pollutant Discharge Elimination System Permit, 1978 WL 21140, 1 E.A.D. 455 (E.P.A., Aug 04, 1978) (No. APPLICATION NH 00203, 76-7). NJDEP also agrees that cost/benefit studies are typically prepared by the permittee. NJDEP then reviews these studies against applicable laws and guidance that are available at that time. Given the absence of a Section 316(b) regulation for such a long period, NJDEP has had to rely on relevant case law.

Regardless of past practice, the 2011 proposed rule sets a new playing field. Specifically, the proposed 2011 rule continues with a requirement for a permittee of BL England's size to submit a cost evaluation study as well as a benefits evaluation study which is due within 7.5 years from rule finalization. NJDEP did voice concerns on the difficulty of using societal costs and benefits in a site-specific BTA determination. As noted in NJDEP's August 17, 2011 comments on the draft rule:

NJDEP supports the decision of entrainment to be left to the states as well as the consideration of the following factors specified in 125.98(e) namely: (1) numbers and types of organisms entrained; (2) entrainment impacts on the waterbody; (4) thermal discharge impacts, (5) impacts on the reliability of energy delivery within the immediate area; (6) impact of changes in particulate emissions or other pollutants associated with entrainment technologies, (7) land availability; (8) remaining useful plant life; and (9) impacts on water consumption.

However, NJDEP does not support item (3), namely the consideration of quantified and qualitative social benefits and social costs of available entrainment technologies including ecological benefits and benefits to any threatened or endangered species. Under the proposed rule States can require an available technology (e.g. cooling towers) if the social costs of compliance are justified by the social benefits. Social costs encompass a long list of factors including non-water quality costs such as changes to energy consumption, estimates of air emissions, noise, etc. whereas social benefits include non-market benefits such as a household's "willingness to pay" for the protection of fish based on a sense of altruism. Evaluating costs and benefits at the "social level" is inherently complex, subjective and almost impossible to quantify particularly with respect to non-market values.

In fact, as part of its effort on the rule-making, EPA is developing a stated preference survey to estimate total willingness to pay for improvements to fishery resources affected by impingement and entrainment mortality from in-scope 316(b) facilities. However, EPA did not have sufficient time to fully develop and implement this survey for the proposed regulation which serves to illustrate the complexity in defining social benefits. By incorporating such an ambiguous and complex test for requiring entrainment technologies, EPA has made the state's ability to require any entrainment technology nearly impossible. We also note that having to prove that the social costs are justified by the social benefits is a step backward from the currently utilized wholly disproportionate standard found in relevant case law.

NJDEP is unclear as to the commentator's suggestion that NJDEP base its decision on EPA's national stated-preference study. This survey is relevant to the rule-making effort and in evaluating societal costs and benefits as part of the rule. This is not the same as a site-specific BTA determination in which NJDEP is evaluating costs and benefits. In addition, as noted in **Response 3**, it is not appropriate to pre-judge the results of an analysis which has not yet been formalized and required in a final rule. This issue should be revisited upon finalization of the rule.

#### **Comment 8**

A proper BPJ analysis would have found closed-cycle cooling to be BTA at B.L. England. Such analysis assumes, as NJDEP did, that B.L. England is categorized as an existing facility under EPA's proposed regulations for existing facilities rather than a "new facility" under EPA's Phase I regulations for cooling water intake structures. In addition, there are two further reasons supporting closed-cycle cooling at B.L. England that differentiate it from other existing facilities.

First, regardless of how it may be categorized under the federal regulations, Unit 4 is effectively a new unit and NJDEP should regulate it as such. The repowering project provides an opportunity to upgrade the balance of the plant surrounding Unit 4 and, because its operating life will be extended, the investment in Unit 4 can be amortized over a considerable lifespan. In the federal rulemaking docket, EPA's technical staff wrote a draft regulation that would have treated a repowered facility like B.L. England as a new unit, meaning it would be required to reduce impingement and entrainment to levels commensurate with a closed-cycle cooling system. A few months before proposal, EPA submitted a draft of its proposed rule to the Office of Management and Budget (OMB) for interagency review. EPA released a "redlined" version of its proposed rule which reflected OMB's suggestions and recommendations. EPA asserted that repowered units should be treated like any other new unit since repowerings provide the ideal opportunity to design and construct the new units without many of the additional expenses associated with retrofitting an existing unit to closed-cycle. Based on EPA's reasoning in that internal version of the proposed rule, NJDEP should require closed-cycle cooling. The facilities for which NJDEP and other permitting agencies have required installation of closed-cycle cooling (e.g. Oyster Creek, Brayton Point, Indian Point, Merrimack and Mirant Canal) are all existing facilities. Accordingly, the case for closed-cycle cooling as BTA is even stronger at B.L.

England since the above noted existing facilities all must be retrofit after being in operation for many years.

Second, the Proposed Rule's definition of "new unit at an existing facility," may not hold up in court if finalized. EPA's rationale for why repowerings are akin to new units and new facilities was deleted from the proposed regulation at the insistence of the OMB. Because OMB does not have technical expertise relevant to evaluating the similarity of repowerings, retrofits and new construction its technical decisions about repowerings merit no deference. If EPA's proposed definition of "new unit at an existing facility" is restored to the definition originally developed by EPA in 2011, B.L. England's repowering will be categorized as a "new unit at an existing facility," which would require application of a categorical standard requiring closed-cycle cooling.

## Response 8

NJDEP appreciates the commentor's support of NJDEP's determination that BL England is subject to the proposed rules as an existing facility rather than the Phase I final regulations for new facilities. As noted in the 2013 Fact Sheet, NJDEP evaluated whether the federal Section 316(b) regulations under "Phase I" (40 CFR Part 125, Subpart I) were applicable to this facility. Phase I regulations are applicable to new facilities and were published in the Federal Register Notice dated December 18, 2001

(<http://www.epa.gov/fedrgstr/EPA-WATER/2001/December/Day-18/w28968.htm>). As per 40 CFR § 125.83 the Department determined that BL England is not a "new facility" based on the following:

- BL England is not proposing a greenfield or stand-alone facility but rather is a repowered version of an existing facility.
- The existing cooling water intake structure is being utilized for the repowered units.
- The design capacity of the existing cooling water intake structure is being decreased due to less water use.

NJDEP also evaluated whether or not Unit 4 met the definition of a "new unit" in the proposed rule. New units are required to reduce impingement and entrainment at a level commensurate with closed-cycle cooling as per 40 CFR § 125.93(d) of the proposed rule. On page 22282, new unit is defined as follows:

*New unit* means any addition of an operating unit at an existing facility where the construction begins after [effective date of the final rule], including but not limited to a new unit added to a new or existing facility for the same general industrial operation, but that does not otherwise meet the definition of a new facility at § 125.83. *New unit* includes any additional unit where that unit is not subject to the requirements of Subpart I. For purposes of this subpart, new unit refers to newly built units added to increase capacity at the facility and does not include any rebuilt, repowered or replacement unit, including any units where the generation capacity of the new unit is equal to or greater than the unit it replaces.

BL England is NOT a new unit since it is repowering its plant. Also BL England is not eligible under the Phase I rule at 40 CFR Part 125, Subpart I. As described in the 2013 Fact Sheet:

After the repowering project is complete, the power generating capacity of the station will increase from 447 MW to 584 MW, which is an increase of 131 MW or approximately 30%. While overall energy generating capacity will increase, nitrogen oxide and sulfur dioxide emissions will significantly decrease. As noted above, by the date of the repowering on May 1, 2016, operations from Units 1 and 2 will have ceased. Unit 1 will be retired and Unit 2 will cease operations as a coal-fired unit. Unit 3 which now runs on #6 oil will convert to natural gas. Unit 4 will consist of a new combined cycle combustion turbine which runs on natural gas with a Heat Recovery Steam Generation (HRSG) unit, but will utilize the existing steam turbine that was formerly associated with Unit 2. The former Unit 2 steam turbine is associated with the circulating cooling water.

In sum, repowering BL England does not qualify as a “new unit” under the proposed rule.

With respect to the second part of this comment, the commentor is suggesting that NJDEP not use the proposed rule definition of new unit and instead rely on an internal version of the rule submitted to OMB that is available as part of the docket. In this internal version of the rule, the regulatory framework treated “new units” in a different fashion where repowered units would be treated as “new units”. NJDEP cannot use an internal version of the rule since internal documents are not valid for the purposes of NJDEP in rendering a decision. Instead, NJDEP must rely on the proposed rule as drafted.

The commentor also contends that NJDEP should not utilize the proposed version of the rule which changed from this internal version based on input by OMB. The commentor supports this suggestion by asserting that OMB does not have technical expertise on issues relating to repowering. Again, NJDEP maintains that it would also be legally inappropriate for NJDEP to speculate on the appropriateness of input as part of the rule-making process and instead must rely on the official proposed version of the draft rule.

Finally, the commentor is contending that NJDEP abandon this “new unit at an existing facility” definition based on the possibility that the proposed rule may not hold up in court upon finalization or because OMB does not have appropriate expertise. This is also not legally appropriate or defensible.

## **Comment 9**

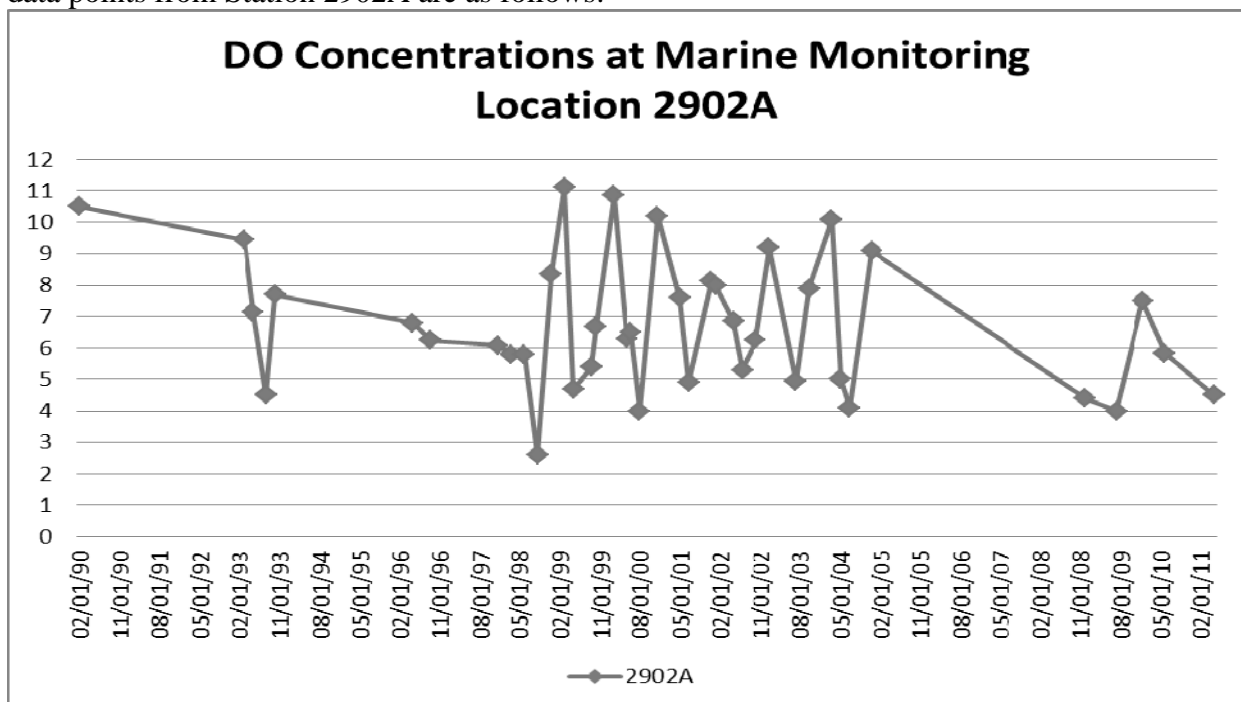
The segment of the Great Egg Harbor Bay into which B.L. England discharges its waste heat is impaired for dissolved oxygen. The water quality standard for dissolved oxygen in Great Egg Harbor is 5 mg/L averaged over 24 hours, and no less than 4.0 mg/L at any time. The two nearest water quality monitoring stations in NJDEP’s Marine Water Monitoring Program are Station 2902A and Station 2720B where together these stations give a good indication of the water quality in Great Egg Harbor Bay near B.L. England. Further, water quality monitoring conducted at Station 2720B shows that this portion of Great Egg Harbor Bay has experienced algal blooms and brown tides in the past, most recently an algal bloom in July 2012. Most summers, the portion of the Harbor nearest to B.L. England fails to meet this standard.

The discharge of heat from B.L. England's once through cooling system contributes to these water quality violations. Dissolved oxygen concentrations in water are inversely correlated to temperature where hotter water contains less oxygen and colder water holds more oxygen. By raising the water temperature, B.L. England reduces its dissolved oxygen concentration. With the addition of nutrients and other oxygen demanding substances in the water, the dissolved oxygen concentration is far lower. In summertime, average water temperatures in Great Egg Harbor Bay typically range from 20-27 degrees Celsius. During summer, when dissolved oxygen concentrations are lowest, B.L. England is authorized to discharge water from Great Egg Harbor Bay up to a maximum temperature of 38.3 degrees Celsius. This temperature increase reduces the maximum oxygen concentration in the discharged water by a quarter, before accounting for oxygen demanding substances.

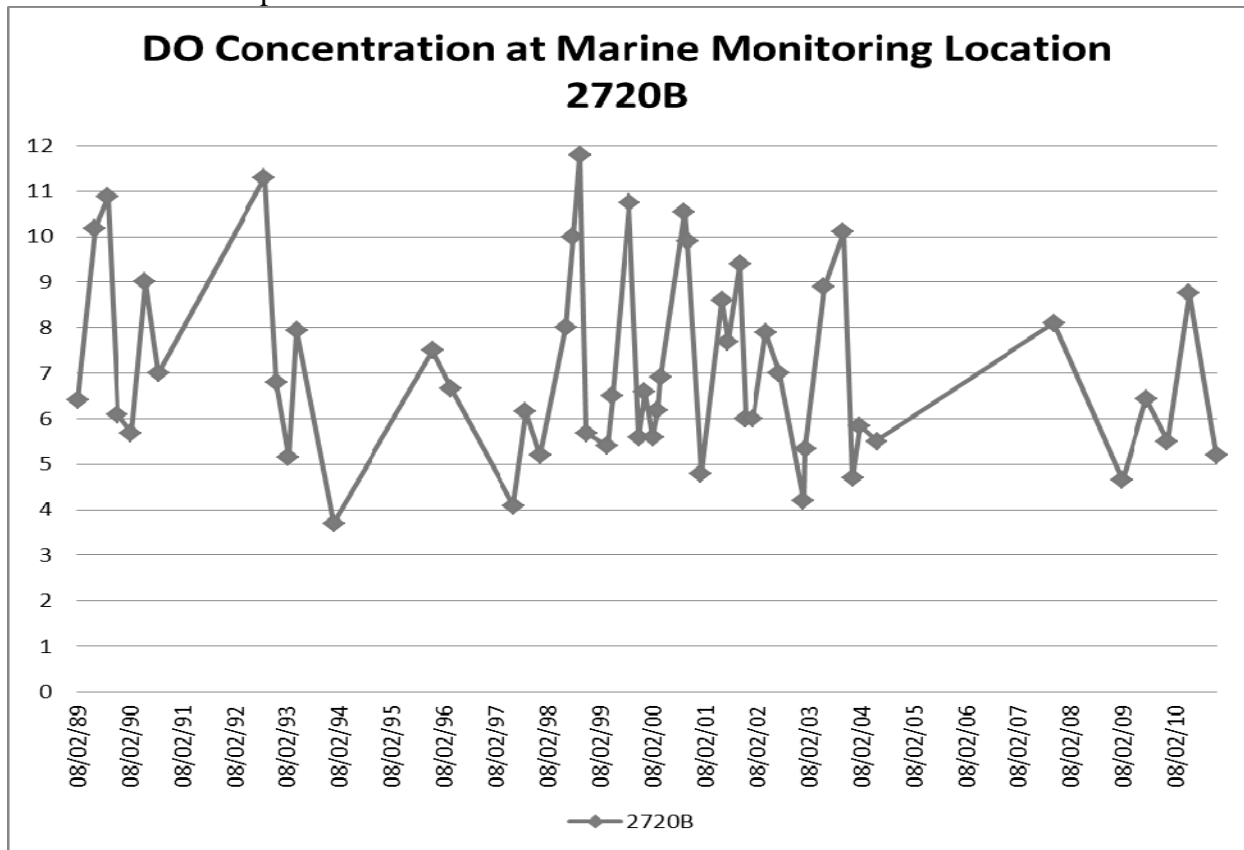
### Response 9

The commentor is correct in that the receiving waterbody is considered "impaired" for DO. A DO impairment is typical for many of the other monitoring stations near the Atlantic Ocean. In fact, according to the 2010 303(d) List of Water Quality Limited Waters ("303(d) Report") which is part of the "New Jersey Integrated Water Quality Monitoring and Assessment Report," the entire Atlantic coastline from Sandy Hook to Cape May is impaired for DO.

The commentor is correct in that NJDEP monitors various water quality stations for a number of parameters including DO. NJDEP has evaluated the data from the two monitoring stations referenced in this comment. Station 2902A is approximately 6336 feet upstream of the facility at the mouth of the Tuckahoe River. While the Great Egg Harbor Bay where BL England discharges is tidal, this station may be more indicative of the water quality draining from the Tuckahoe River given that it is located at the mouth of the Tuckahoe River. The individual DO data points from Station 2902A are as follows:



Station 2720B is approximately 3942 feet from the facility and is located downstream. The individual DO data points from Station 2902 are as follows:



In reviewing these charts, most individual data points are well above the instantaneous minimum value of 4.0 mg/L and average values are above the 5.0 mg/L average. In addition, there are many other confounding factors that also contribute to dissolved oxygen levels in a waterbody such as non-point pollution effects, other dischargers, weather, etc. While point source discharges are regulated through NJPDES permits, these other non-point sources are not directly regulated.

The Department does not agree that the Great Egg Harbor Bay is experiencing objectionable algal densities and nuisance aquatic vegetation. With respect to the contention regarding an algal bloom in July 2012 at Station 2720B, data downloaded from the NJDEP Bureau of Marine Water Monitoring website states the following:

Date	Time	Water Temp. (°C)	Chlorophyll (µg/L)	Dominant Species	Toxic Species*
7/12/12	10:42am	26.5	2.10	Sparse algal concentrations	None Present
7/18/12	9:56am	28.2	7.99	Thalassiosira sp. (200 cells/mL)	None Present

Comments from the July 19, 2012 Report: The waters of Great Egg have low levels of *Thalassiosira* sp (200 cells/mL). No toxic species were detected.

The Department does not agree that the fact that algae is present is equivalent to an algal bloom.

Finally, with respect to the contention that BL England is contributing to the DO impairment, there currently is no discharge data to prove this contention. It would be inappropriate to assume that DO levels from BL England are the cause of the impairment given this lack of discharge data as well as the many other contributing factors to DO levels. It would also be inappropriate to deny BL England a NJPDES permit based on this assumption. Additional information regarding the appropriateness of discharge requirements for DO at the surface water outfalls is included in **Response 11**.

Please refer to **Response 10** regarding discharge requirements for DO at the surface water outfalls.

#### **Comment 10**

Under N.J.A.C. 7:14A-13.5(a), the Department must establish water quality based effluent limits to protect water quality. But NJDEP has not set any limits on the dissolved oxygen content of the cooling water, on the organic matter released at DSNs 008A, 009A, and 010A, or on any other parameter to address the discharge of heat and nutrients from these outfalls.

The absence of water quality based effluent limits is surprising given that NJDEP has set dissolved oxygen limits at DSN 013A; namely a 24-hour average limitation of 5.0 mg/L and an instantaneous minimum limitation of 4.0 mg/L. These effluent limits are equivalent to the water quality criteria for dissolved oxygen that apply to saline estuaries pursuant to N.J.A.C. 7:9B-1.14(d). By requiring that the discharge meets the in-stream water quality criteria at the point of discharge, NJDEP ensures that the discharge from DSN 013A does not cause or contribute to a violation of water quality standards. Yet the discharge from DSN 013A is presently 0.69 MGD, and will drop to just 0.22 MGD after repowering. In comparison, the 294 MGD of heated, nutrient-laden discharge from the cooling water system is hundreds of times larger and likely to have a far more significant impact, especially in the summertime, even at 167 MGD later. NJDEP must establish heat and dissolved oxygen effluent limits for DSN009A and DSN010A that require the discharge to immediately meet a 24-hour average limitation of 5.0 mg/L and an instantaneous minimum limitation of 4.0 mg/L.

In the Fact Sheet, NJDEP places substantial emphasis on the possibility that “the repowered operating conditions and closure of Unit 1 will result in a significant [cooling water] discharge flow reduction.” But the anticipated changes to the discharge from the planned repowering are legally irrelevant to NJDEP’s renewal of this NJPDES permit today because they take place in the future. While NJDEP considers them to be likely, its legal obligation is to write a permit that adequately controls the discharge that exists today.

## **Response 10**

Generally, DO is a parameter that is included in wastewater discharges, not in cooling water discharges. According to the State of Michigan (<http://www.michigan.gov/documents/deq/wb-npdes>):

Dissolved oxygen limits are commonly placed in permits for discharges which have the potential to exert an oxygen demand. These types of discharges include effluent from wastewater treatment plants, food processing and manufacturing operations and landfills. Dissolved oxygen limits are not necessary for all permits, such as discharges of clear non-contact cooling water, where levels of dissolved oxygen are expected to be high.

DO limits or monitoring requirements are not applied to cooling water discharges at other NJPDES permits for power plants. Similarly, DO is not specified as a discharge requirement in the Federal Effluent Limitation Guidelines for the Steam Electric Power Generating Point Source Category at 40 CFR 423 nor in the Steam Electric Power Generating Point Source Category: Final Detailed Study Report (EPA-821-R-09-008, DCN 06390, October 2009). Finally, a direct DO permit limitation has not been applied to any of the NPDES permits referenced in the comments submission in other states, namely Indian Point, Mirant Canal, E.F. Barrett and Merrimack.

Nonetheless, the Department recognizes the commentor's concern in that DO levels can be related to heat. The Department maintains that BL England is regulated for temperature in a holistic fashion by use of an effluent temperature limit, a temperature differential limit and an overall heat limit. Therefore, as a conservative and proactive measure, the Department is adding a DO monitoring requirement to the cooling water outfalls, namely DSN 001A, 009A and 010A, as well as to the intake at DSN 010A. This will allow the Department to track both the intake and effluent to assess any contributions from the heated discharge. Part IV also contains a reopener clause at Part IV F.2. that would allow NJDEP to incorporate DO limits through a major permit modification if deemed necessary based on submitted data. The incorporation of more frequent monitoring in a final permit action is allowable under N.J.A.C. 7:14A-16.5.

This change affects Tables III-A-1, III-E-1, and III-F-1 where DO monitoring has been included.

## **Comment 11**

The dead, rotting organisms that are entrained and killed by the cooling system are discharged at DSNs 009A and 010A thereby contributing to the dissolved oxygen impairments in Great Egg Harbor Bay. Also, dead fish are sprayed off the screens and discharged at DSN 008A. The discharge of all these dead organisms adversely effects dissolved oxygen levels and is equivalent to dumping several tons of fertilizer into Great Egg Harbor Bay every year.

As explained above, the area of Great Egg Harbor Bay adjacent to B.L. England has experienced algal blooms and is unsuitable for its designated uses due to dissolved oxygen levels. NJDEP has identified “agriculture” – i.e. nutrient runoff – as one cause of this impairment. Therefore

the uncontrolled discharge of nutrients from DSNs 008A, 009A, and 010A causes or contributes to violation of both the dissolved oxygen and nutrient water quality standards and must be subject to effluent limits.

### Response 11

NJDEP cannot place limitations on the amount of detritus and dead organisms that are released through a discharge. Rather, the appropriate regulatory mechanism is the federal Section 316(b) regulations as described in **Responses 1** through **8**. The approach to Section 316(b) is not to directly limit the amount of dead organisms and detritus that can be discharged but rather to require the installation of intake protection technologies to minimize impingement and entrainment losses. For example, the proposed rule requires an impingement mortality standard. As stated in **Response 5**, this permit requires an expedited study of modified Ristroph traveling screens with fish buckets where the screens are continuously rotated with a dual pressure spray wash and fish are then returned via a non-abrasive fish return system. These measures are expected to decrease impingement mortality, which will in turn reduce the quantity of dead organisms that are returned to the waterbody. Screens can address impingement mortality; for example, even with the simplified screen system at the current intake structure, blue crabs show median survivability of 92.7% in recent impingement data. With respect to entrainment, many early life stage organisms can survive entrainment where survivability varies from species to species and is often dependent on life stage. Nonetheless, permitting agencies frequently assume 100% entrainment mortality in evaluating entrainment technologies since it is difficult to quantify entrainment mortality for each species and life stage. This analysis will be part of any review of an entrainment mortality study as required under the proposed Section 316(b) regulations upon finalization.

The Department agrees that the SWQS address nutrients at N.J.A.C. 7:14A-1.14(d), namely phosphorus and nitrogen. As noted in this comment, this citation states the following:

Except as due to natural conditions, nutrients shall not be allowed in concentrations that render the waters unsuitable for the existing or designated uses due to objectionable algal densities, nuisance aquatic vegetation, diurnal fluctuations in dissolved oxygen or pH indicative of excessive photosynthetic activity, detrimental changes to the composition of aquatic ecosystems, or other indicators of use impairment caused by nutrients.

The commentor is implying that this requirement must be applied directly to the discharge. However, because the SWQS set standards for the stream, this requirement applies to the waterbody and not the direct discharge. The purpose of the SWQS is to set standards for the waterbody whereas the NJPDES permit sets standards for the discharges in order to ensure that the SWQS are attained. While it is true that NJDEP sometimes applies SWQS as end-of-pipe effluent limitations for facilities on impaired waterbodies, this is only when there is a demonstrated link showing that the discharge contributes to this impairment. The permittee's discharge data must show cause or the reasonable potential to cause a violation of the SWQS in order for NJDEP to calculate and apply a WQBEL for phosphorus or nitrate. B.L. England does not add phosphorus or nitrate in the discharges from the cooling towers and the screen backwash.

Also, it is difficult to apply a narrative criteria such as that cited above at end-of-pipe.

Finally, the Department does not agree that impinged or entrained organisms can be equated to "agriculture".

### **Comment 12**

Instead of establishing water quality based effluent limitations, NJDEP is proposing to renew B.L. England's alternative heat limits set under the Clean Water Act section 316(a) variance provision. NJDEP explained that its intent to renew the variance is based primarily on the fact that the overall discharge of heat from B.L. England is decreasing yet this analysis is flawed in several ways.

First, it is unreasonable for NJDEP to rely directly on there being less heat discharged presently than was discharged when the 316(a) variance was last renewed in 2005 since Great Egg Harbor Bay was not yet listed as impaired for dissolved oxygen. The relevant question is whether the alternative heat limit proposed for the period before and after the repowering is acceptable in light of the impairment. Because an alternative heat limit would cause or contribute to exceedances of water quality standards, it is not acceptable.

Second, the proposed 316(a) variance determination places significant emphasis on the plant's total heat load dropping with the removal of Unit 1 but NJDEP is allowing B.L. England to increase the temperature of the discharge in summertime by several degrees in order to run supplementary burners (duct burners). NJDEP believes that the reduced overall heat load will shrink the outer zone of the thermal plume, the 1.5 degree isotherm, by around 30% yet the "zone of initial dilution" will increase in both size and temperature. Thus, the repowered plant will actually expand the area of Great Egg Harbor Bay that is unfit for aquatic life.

Finally, the proposed variance is unlawful since the permittee's burden of proof is to demonstrate that the alternative limit will assure protection of a balanced indigenous population of shellfish, fish and wildlife considering the cumulative impact of its thermal discharge together with all other significant impacts on the species affected. Neither B.L. England's request for a variance nor NJDEP's proposed variance determination discuss the cumulative impact of increased heat, nutrients, and low dissolved oxygen levels on the health of Great Egg Harbor Bay and its denizens.

### **Response 12**

By way of background, Section 316(a) of the Federal Clean Water Act regulates the thermal component of surface water discharges. Specifically, Section 316(a) authorizes variances from thermal SWQS where it is shown that the alternative limit proposed will "assure the protection and propagation of a balanced, indigenous population of shellfish, fish, and wildlife" in the receiving water. Section 316(a) of the Federal Clean Water Act states, in part:

...the Administrator (or if appropriate, the State) may impose an effluent limitation under such sections for such plant, with respect to the thermal component of such discharge (taking into account the interaction of such thermal component with other pollutants), that will assure the protection and propagation of a balanced, indigenous population of shellfish, fish and wildlife in and on that body of water.

In other words, the Department can deviate from the SWQS expressed for point sources and for heat dissipation dimensions provided that the conditions of Section 316(a) of the Clean Water Act are met. As stated at N.J.A.C. 7:9B-1.5(c).8.i., a Section 316(a) determination would override the SWQS thermal criteria.

8. Temperature criteria at N.J.A.C. 7:9B-1.14(d) apply unless an alternative effluent limitation is approved in accordance with Section 316(a) of the Clean Water Act, 33 U.S.C. 1326(a).

Federal regulations at 40 CFR Part 125 125.70 – 125.73 (Subpart H – Criteria for Determining Alternative Effluent Limitations Under Section 316(a) of the Act) serve to guide implementation of Section 316(a) of the Clean Water Act. The Department used these regulations in establishing the Section 316(a) determination in the 2013 Draft Permit.

Regarding the DO impairment for Great Egg Harbor Bay, the Department does not agree that there is any evidence that BL England is contributing to the DO impairment through its discharges as noted at length in **Responses 10, 11 and 12**. Again, DO is not generally a regulatory requirement for cooling water discharges and the fact that the predominant discharges are comprised of cooling water does not change from current plant conditions to repowered plant conditions. Therefore, the issue of the waterbody being impaired for DO before or after 2005 is moot.

Secondly, while it is true that areas of the zone of initial dilution (ZID) may have greater temperatures during certain intermittent conditions, the Department does not agree that the overall plume will be increased under the repowered plant conditions. As stated in the 2013 Fact Sheet:

...After repowering, the once-through cooling water discharge will be discharged through DSN 010 and the cooling tower blowdown will continue to be discharged through DSN 001. The once-through cooling water discharge through DSN 009 will be eliminated. The size and characteristics of the thermal plume during current conditions as well as after repowering are dependent on the thermal characteristics of the cooling water discharge, the station's net generation over several days, the hydrodynamics of the bay and meteorological conditions. Simplified thermal modeling results show a net reduction in the overall area of the plume from approximately 26 to 32% for the repowered plant condition as compared to the existing plant configuration.

And with respect to the operation of supplementary burners and any effect on the plume, the following is stated:

...While the current heat loading limitations for the Station have been retained from the existing permit, the overall thermal contribution from the Station will decrease from the existing plant configuration based on the elimination of any heat loading from DSN 009A after repowering. In addition, the effluent temperature and temperature differential limitations for DSN 010A for September through May have been retained from the existing permit. However, with respect to the period from June through August for DSN 010A, the Department is imposing a temperature differential limit of 11.0 degrees Celsius as a daily maximum and an effluent temperature limit of 40.5 degrees Celsius as a daily maximum. This change is necessary since higher temperatures will be realized as a result of the use of the duct burners as well as the use of the steam turbine bypass. This operating scenario will not be continuous because the use of the duct burners is limited by the Title V Air Permit and the steam turbine bypass only operates for a few hours during each plant startup, shutdown or infrequent turbine transients. While temperatures within the ZID may at times be greater as compared to the current plant configuration, the ZID occupies very small areas within GEHB and is expected to have minimal effect on aquatic organisms in GEHB beyond the effects considered in prior Section 316(a) assessments.

Based on the above and the shutdown of Unit 1, the overall plume will decrease under repowered plant conditions. Operation of duct burners occurs very infrequently and for very short periods of time. As a result, NJDEP does not agree with the contention that the repowered plant will actually expand the area of Great Egg Harbor Bay that is unfit for aquatic life nor does the Department agree that Great Egg Harbor Bay is unfit for aquatic life. As evidenced by the impingement and entrainment data presented in the 2013 Draft Permit, many organisms are present in the area of the intake. Note that the 2010 303(d) list does not specify any other impairments for Great Egg Harbor Bay with the exception of DO.

Finally, NJDEP maintains that the applicant has met the burden of proof with respect to a Section 316(a) variance including cumulative impacts. As stated in the 2013 Fact Sheet:

In evaluating the renewal of the section 316(a) variance, the Department considered the current application, applicable state and federal regulations, and applicable guidance documents. The Department recognizes that the applicant's burden with regard to the renewal of a thermal variance is "to support the continuation of the variance" and does not require the same level of proof as an application for an initial variance in accordance with 40 CFR 125.72(c).

One of the factors that the Department considered regarding this request is whether or not operating characteristics have changed. Specifically, the Department evaluated existing discharge monitoring report data with respect to flow, temperature and heat as well as modeling estimates. The Department also reviewed available information with respect to the balanced indigenous community and the effects of the plume on such.

Based on this information, the Department concluded the following:

With respect to recent and current plant operations, the Department recognizes that the Station's operations and the resulting physical thermal plume have been below the design flow for DSNs 001A, 009A and 010A. While the current heat loading limitations for the Station have been retained from the existing permit, the overall thermal contribution from the Station will decrease from the existing plant configuration based on the elimination of any heat loading from DSN 009A after repowering. In addition, the effluent temperature and temperature differential limitations for DSN 010A for September through May have been retained from the existing permit. However, with respect to the period from June through August for DSN 010A, the Department is imposing a temperature differential limit of 11.0 degrees Celsius as a daily maximum and an effluent temperature limit of 40.5 degrees Celsius as a daily maximum...

Based on the regulations at 40 CFR Part 125.73(c), the Department has determined that a variance under Section 316(a) is warranted in accordance with Section 316(a) of the Clean Water Act. This variance is based on the Department's findings that: (1) the operating conditions for years 2008 through 2010 are below the bounds of the operating conditions at the time of the last 2005 variance; (2) the repowered operating conditions and closure of Unit 1 will result in a significant discharge flow reduction; and (3) the overall heat loading limits from the station have been retained. As a result, the Department has determined that a thermal discharge at the Station, in accordance with the proposed temperature and heat limitations, is expected to assure the protection and propagation of the balanced indigenous population.

In sum, the Department maintains that the Section 316(a) analysis is appropriate and based on relevant laws and guidance.

### **Comment 13**

In this permit renewal, NJDEP plans to weaken the existing heat limits to accommodate the permittee's desire to install duct burners at B.L. England in order to avoid a dropoff in summertime generating capacity without having to pay to upgrade the condenser cooling system. Specifically, the Department will raise the summertime (June to August) temperature differential limit at DSN 010A from 8.8 to 11 degrees Celsius as a daily maximum and the maximum temperature effluent limit at DSN 010A from 38.3 to 40.5 degrees Celsius.

Relaxation of this heat effluent limit clearly violates New Jersey's anti-backsliding rules at N.J.A.C. 7:14A-13.19. Based on this language, the increase in the temperature of the discharge is illegal unless an exemption under Section 402(o) applies yet none of the exceptions described therein apply at B.L. England. The provision NJDEP cites to justify less stringent effluent limitations stipulates that "material and substantial alterations or additions to the permitted facility *occurred after permit issuance which justify* the application of a less stringent effluent limitation." Neither of these conditions have been met. First, although a repowering is contemplated by 2016, no material or substantial alterations have occurred at B.L. England yet. Until the repowering is completed, in 2016, the exception cited by NJDEP cannot possibly apply. Second, even if the proposed repowering occurs as planned, NJDEP has not explained why a less stringent effluent limitation for

the discharge of heat would be justified and why a greater loss of habitat is justified. As explained above, although the reduced volume of the discharge will shrink the overall size of the thermal plume, the increased heat of the discharge will expand the zone at the core of the plume that is totally uninhabitable, thus destroying more habitat than the current plume.

Finally, even if the exception cited by NJDEP did apply, Section 402(o) also provides that “in no event may such a permit to discharge into waters be renewed, reissued, or modified to contain a less stringent effluent limitation if the implementation of such limitation would result in a violation of a water quality standard . . .” 33 U.S.C. § 1342(o)(3). Since the less stringent effluent limitation contemplated by NJDEP would result in violation of the dissolved oxygen water quality standard in Great Egg Harbor Bay, there is simply no way that NJDEP can authorize B.L. England to backslide by discharging water at a higher temperature than at present.

### **Response 13**

First and foremost, because the overall heat loading from the Station will decrease, it is questionable that antibacksliding is even triggered. Nonetheless, to address the increase in effluent temperature and temperature differential limits at DSN 010 during June through August, the Department conservatively evaluated the requirements referenced in N.J.A.C. 7:14A-13.19 in the 2013 Fact Sheet as well as in this response below. The antibacksliding citation at N.J.A.C. 7:14A-13.19 states the following:

Except as provided for under Section 402(o) of the Federal Act (33 U.S.C. § 1342(o)), when a permit is modified, renewed or reissued, all effluent limitations or standards shall be at least as stringent as the final and effective effluent limitations or standards in the previous permit.

And Section 402(o)(2) of the Federal Clean Water Act states the following with respect to anti-backsliding and its exceptions:

#### **(o) Anti-backsliding**

##### **(1) General prohibition**

In the case of effluent limitations established on the basis of subsection (a)(1)(B) of this section, a permit may not be renewed, reissued, or modified on the basis of effluent guidelines promulgated under section 1314(b) of this title subsequent to the original issuance of such permit, to contain effluent limitations which are less stringent than the comparable effluent limitations in the previous permit. In the case of effluent limitations established on the basis of section 1311(b)(1)(C) or section 1313(d) or (e) of this title, a permit may not be renewed, reissued, or modified to contain effluent limitations which are less stringent than the comparable effluent limitations in the previous permit except in compliance with section 1313(d)(4) of this title.

##### **(2) Exceptions**

A permit with respect to which paragraph (1) applies may be renewed, reissued, or modified to contain a less stringent effluent limitation applicable to a pollutant if—

- (A) material and substantial alterations or additions to the permitted facility occurred after permit issuance which justify the application of a less stringent effluent limitation...

The commentor is correct in that NJDEP cited that the repowering project qualifies as a material and substantial alteration or addition to the permitted facility pursuant to Section 402(o) of the Federal Clean Water Act. Contrary to the commentor's contention, the Department does not agree that Section 402(o) requires the permittee to complete the material and substantial alteration before requesting higher limits. Rather, the material and substantial alteration would have occurred after the issuance of the "previous permit", as referenced in Section 402(o)1, which in this case refers to the 2005 NJPDES renewal. Secondly, NJDEP maintains that it explained that higher limits were necessary due to changes at the plant that will result in intermittent higher temperatures due to operation of the duct burners. Excerpts of this scenario from the 2013 Fact Sheet are summarized in **Response 12**.

As noted in detail in **Responses 9 and 10**, the Department maintains that there is no evidence that the non-contact cooling water discharges at BL England do not result in violation of the water quality standards.

#### **Comment 14**

The variance request and variance determination are silent with respect to climate change. With a major repowering proposed, whatever cooling system is built now will operate for at least another 40 or 50 years. In the long run, the failure to consider climate change is not in B.L. England's interests, because if the plant is reliant on a once-through cooling system, increasing temperatures in Great Egg Harbor Bay may limit the repowered plant's ability to run when intake water temperatures are hot. During recent heat waves, some U.S. power plants have already had to reduce or curtail operations to comply with thermal discharge regulations such as the Millstone nuclear plant in Connecticut. Higher global temperatures will only increase the frequency with which such compliance issues will arise in northern states. In the future, power plants with once-through cooling systems will need to adapt their cooling systems to ensure usable capacity since they will be faced with higher summertime intake temperatures due to an increased frequency of low flows, higher overall river temperatures, and higher peak summer temperatures.

#### **Response 14**

At this time there are no regulatory criteria to consider climate change as part of Section 316(a). In fact, one could argue that climate change considerations would result in higher temperature limits, temperature differential limits and heat limitations. Instead, NJDEP is maintaining its heat limits, temperature differential limits and effluent temperature limits from the previous permit with the exception of the period of June through August for DSN 010A.

#### **Comment 15**

In some cases, a closed-cycle cooling system is needed in order to comply with state water quality standards, irrespective of whether the Act's technology-based provisions also require use of the technology. At least four power plants – the McDonough and Yates plants in Georgia, and the Canadys and Wateree plants in South Carolina have converted to closed-cycle cooling primarily to reduce thermal discharges that ran afoul of state water quality standards. As at those plants, the thermal pollution and the nutrients discharged by B.L. England's once-through cooling system cause

sufficient environmental harm to warrant a conversion to closed-cycle cooling.

#### **Response 15**

As described in further detail in **Response 6**, it is not appropriate to compare the site-specific information of various national plants. This is based on variation in a number of factors including receiving waterbody characteristics, discharge characteristics, plant characteristics, environmental characteristics, intake water availability, etc. Also, as noted at length in **Responses 12 and 13**, NJDEP maintains that its Section 316(a) determination is in accordance with applicable regulations and guidance. Finally, the Department does not agree that there is any evidence of documented harm as a result of BL England's discharges.

#### **Comment 16**

NJDEP should have consulted with the U.S. Fish and Wildlife Service and with the National Oceanic and Atmospheric Administration (NOAA) in determining whether the thermal pollution discharged from B.L. England is allowable and whether a 316(a) variance should be granted. Both federal agencies have voiced general concern about the discharge of thermal pollution in marine estuaries. Also, both agencies have a strong interest and understanding of the ecological health of Great Egg Harbor Bay, have supported NJDEP's conservation and research efforts, and have consulted with NJDEP on other NJDPES permitting processes. If NJDEP has not already done so, it should now consult with US. Fish and Wildlife Service and with the National Oceanic and Atmospheric Administration prior to issuance of the final permit to learn more about the short and long term impacts of this permit.

#### **Response 16**

NJDEP has forwarded the draft permit action to NOAA and the US Fish and Wildlife Service. In addition, the related air permit, namely the Federal Prevention of Significant Deterioration (PSD) construction permit, was forwarded to the US Fish and Wildlife Service as part of its recent public comment period which began on February 6, 2013. No comments were received on the PSD permit.

#### **Comment 17**

NJDEP failed to gather adequate effluent data then uses this as an excuse for not conducting a reasonable potential analysis before issuing the NJPDES permit. NJDEP then proposes lax schedules for gathering the missing data and does not include reopener provisions in the permit specifying that the permit shall be reopened immediately once the missing data are collected. Commenters have observed this pattern in both the Mercer Generating Station and Hudson Generating Station NJPDES permits and believe that it likely occurs at other facilities as well.

NJDEP must ensure that every NJPDES permit contains effluent limitations for all pollutants that have the reasonable potential to cause or contribute to violations of water quality standards by conducting a reasonable potential analysis. But, the Department claims that it cannot determine whether an existing discharge has the reasonable potential to cause or contribute to a violation of water quality standards unless it has ten water quality samples. Thus, NJDEP concluded that it lacks sufficient data to conduct a reasonable potential analysis as follows:

- At DSN 001A (cooling tower blowdown), including for copper, even though in the four existing water quality samples from this outfall copper was detected in three samples and the highest measurement was 15 times greater than the state water quality standard.
- At DSN 003A (stormwater outfall), because the Department has only four water quality samples. To remedy this deficiency, NJDEP is ordering once-annual sampling. But this means that in five years, when the Draft Permit is finalized and expires, NJDEP still will not have the ten samples it needs to issue a lawful renewal permit; and the oldest of its nine samples will be more than six years out of date.
- At DSNs 009A and 010A (once-through cooling water). Although arsenic and the toxic plasticizer BPA have been detected at values exceeding state water quality standards, “at this time, insufficient data exist to determine the need for WQBELs.”
- At DSN 013A (wastewater treatment plant), because there are only five samples, including the data submitted with B.L. England’s Permit Renewal application. NJDEP is not conducting a reasonable potential analysis or setting water quality based effluent limits even though it detected arsenic and selenium in four of five samples, *with at least one arsenic sample at concentrations nearly 300 times higher than the state water quality standard.*
- At DSN 014A (flue gas desulfurization wastewater), where NJDEP not only concluded that, “at this time, insufficient data exist for most of these parameters to determine the need for WQBELs,” but that it need not even collect such data because the FGD scrubber likely will shut down in 2016, when the repowering is completed.

NJDEP had other options for handling this situation such as it could have relied on the four or five samples available for each outfall, particularly where a sample is above state water quality standards. At a minimum, NJDEP should include:

- A copper effluent limit at DSN 001A, where copper was detected in three samples and the highest measurement was 15 times greater than the state water quality standard;
- An effluent limit at DSN 008A that relates to a parameter such as total organic carbon or biological oxygen demand and addresses the impact that pressure-spraying dead and decomposing fish off the plant’s intake screens has on dissolved oxygen concentrations;
- Arsenic, heat, dissolved oxygen, and nutrient effluent limits at DSNs 009A and 010A; and
- An arsenic effluent limit at DSN 013A (wastewater treatment plant).

Finally, NJDEP should conduct (or require B.L. England to conduct) a program of rapid testing over the next few months to adequately characterize all of the discharges at B.L. England for which it claims to lack sufficient data, and should then issue a final permit that includes water quality based effluent limits.

## Response 17

The commentor is correct in that it is the Department's policy to have sufficient available data before a proper water quality based effluent limit cause and reasonable potential analysis can be conducted. This policy is routinely applied to all NJPDES permits throughout the state. The Department does not agree that this practice is "illegal" since there is no state regulation which stipulates how many data points must be utilized in conducting such an analysis. Rather, it is within the permitting authority's discretion where the permitting authority maintains that sufficient representative data must be available to conduct a proper statistical analysis. Additionally, the U.S. EPA Technical Support Document recommends in Section 3.3 that eight to 12 samples be obtained for parameters of concern. Contrary to the commentor's assertion, NJDEP did include a reopener clause in the draft permit to allow the inclusion of effluent limits if warranted as described in detail in **Response 18**. With respect to the commentor's contention that commenters noted this pattern in the Mercer and Hudson NJPDES permits, it is unclear as to which commenters are being referred to since the only parties that commented on those permits were the permittee.

Toxic pollutants are not commonly the focus of non-contact cooling water discharges since generally the primary pollutant is heat. Current federal steam electric guidelines at 40 CFR Part 423 do not specify metals limits for the types of wastestreams authorized at BL England. And given the conversion from coal to natural gas, it is expected that the process wastewater discharge at BL England will only become cleaner. Also, the internal monitoring point designated as DSN 014, which is the flue gas desulfurization scrubber, will be eliminated. After that time the only wastewater components that will enter the treatment system for DSN 013 will be wastewater from floor drains, deionizer filters, filter backwash, demineralizer wastewater and boiler blowdown.

As noted in the 2013 Fact Sheet, the Department did evaluate available toxic data at all discharges. NJDEP had required extensive priority pollutant sampling at most outfalls where the vast majority of results were non-detectable values. The following is a response to the commentor's specific assertions on each outfall:

- At DSN 001A four data points are available for copper, with three of these values detectable (4 ug/L; 23.4 ug/L; and 45.2 ug/L) and one non-detectable value (<10 ug/L). It is Department policy that a pollutant must be consistently detected in the effluent before a WQBEL analysis is conducted for that pollutant. Four data points are not sufficient for determining a site-specific coefficient of variation and subsequent WQBEL. However, monitoring for copper is increased to semiannual in the final permit so there will be 10 data values available upon permit renewal. Note that copper limits are not established in any other NJPDES permits for cooling tower blowdown across the state.
- Outfall DSN 003A previously consisted of slag pond overflow but now consists of stormwater only. Current data is not likely representative of stormwater data after repowering based on the change in fuel source from coal to natural gas. Also, metals are

not typically present in stormwater yet the Department is requiring an annual metals scan as a conservative measure.

- Intake screen backwash occurs at DSN 008A. Rinsing organisms from the screen is not viewed as an addition of pollutants due to the fact that these organisms are being returned to the same body of water from which they were withdrawn and the permittee is not adding any pollutants to the water. This policy is consistently applied to all power plants across the state. Again, losses of organisms are addressed via Section 316(b) of the Clean Water Act as described further in **Responses 5 and 11**.
- The toxics data from DSNs 009A and 010A is limited to one round of sampling which was submitted with the 2009 application, with the exception of Selenium for which there are four data values. The commentor has requested a WQBEL for Arsenic at these outfalls; however, one data value does not provide a sufficient basis for instituting a new WQBEL. Monitoring has been increased to semiannual for Arsenic and Boron. Semiannual monitoring will provide sufficient data for conducting WQBEL analyses upon renewal. Toxics are not generally present in once-through cooling water discharges.
- At DSN 013A, five data values are available for Arsenic. Results are as follows: 169 ug/L; <6 ug/L; 4 ug/L; 36.2 ug/L and 15.1 ug/L. Since this amount of data is not sufficient for calculating a WQBEL, the monitoring frequency is increased to semiannual and the need for a WQBEL will be reevaluated upon permit renewal. Also, WQBELs are imposed for several toxics at the internal monitoring point DSN 014A. Again, effluent quality at DSN 013A is expected to improve with the repowering since DSN 014A will be eliminated.
- At DSN 014A, WQBELs for chromium, iron, nickel and zinc are carried forward from the existing permit with a weekly monitoring frequency. Monitoring was also increased for the six parameters that were detected in the application data even though the majority of those detected parameters were orders of magnitude below the SWQS as described in the 2013 Fact Sheet. This outfall will cease discharging by May 2016 per the Air Program's Administrative Consent Order since coal burning will have ceased by that date.

NJDEP maintains that it used appropriate judgment in establishing effluent limits and/or increased monitoring frequencies for those wastestreams that have the potential to contain toxic pollutants or where existing data warranted additional monitoring. Regarding the suggestion that additional data be collected at an expedited schedule, it is unclear what purpose this would serve since several discharges will significantly change and/or not occur during the extended construction period and after repowering is complete.

#### **Comment 18**

The state regulations at N.J.A.C. 7:14A-13.8(a)(2) require that a permit developed without

adequate effluent samples “*shall include a reopener clause.*” The requirement to collect sampling data and improve upon a deficient reasonable potential analysis is one of DEP’s basic water quality policies at N.J.A.C. 7:14A-13.5(l). But this Draft Permit does not contain a reopener provision that would allow NJDEP to include the missing effluent limits as soon as possible, although it does contain specific provisions related to the BTA determination, petroleum hydrocarbons in cooling tower blowdown, and new biocides. Further, NJDEP cannot justify setting a sampling schedule that will take five or more years to provide ten data points since the Act requires compliance with water quality standards at all times.

## **Response 18**

As discussed in **Response 17** the Department maintains that the sampling requirements for toxics in this permit are appropriate and do not cause or contribute to an excursion above the SWQS. Contrary to the commentor’s contention, the 2013 Draft Permit does contain a reopener clause. As per Part IV F.2. of the Draft Permit:

The Department may modify or revoke and reissue any permit to incorporate 1) any applicable effluent standard or any effluent limitation, including any effluent standards or effluent limitations to control the discharge of toxic pollutants or pollutant parameters such as acute or chronic whole effluent toxicity and chemical specific toxic parameters, 2) toxicity reduction requirements, or 3) the implementation of a TMDL or watershed management plan adopted in accordance with N.J.A.C. 7:15-7.

In sum, the Department can reopen the permit at any time if effluent data demonstrates the need for additional limits or requirements. Also, the Department can require more frequent monitoring through issuance of a minor permit modification pursuant to N.J.A.C. 7:14A-16.5.

## **Comment 19**

NJDEP could have characterized effluents by using data from similar discharges at other power plants. For example, with respect to DSNs 013A and 014A, which receive effluent contaminated with coal combustion waste, DEP can rely on recent guidance sent from EPA to NPDES permit writers namely the June 7, 2010 memorandum from EPA Director James A. Hanlon regarding Wastewater Discharges from Flue Gas Desulfurization (FGD) and Coal Combustion Residuals Impoundments at Steam Electric Power Plants. This memo cites that metals have the potential to be present in coal combustion waste effluent. As an alternative, NJDEP could have sought the data it required during the four years that lapsed between B.L. England’s submission of a permit renewal application and NJDEP’s issuance of this NJPDES permit. Or NJDEP could simply have rejected B.L. England’s permit renewal application as incomplete and insufficient and demanded more data when it was filed in 2009.

Presumably, NJDEP’s insistence on gathering ten data points before conducting a reasonable potential analysis is based on N.J. ADMIN. CODE § 7:14A-13.8(a). But relying on existing effluent quality, though preferable to other methods, is not the only way to conduct a reasonable potential analysis.

## **Response 19**

While NJDEP recognizes that the above referenced memo may apply to FGD systems as 40 CFR 423 is being redrafted, NJDEP does not agree that information in this memo regarding coal combustion waste is applicable to BL England. Coal combustion residuals, commonly known as coal ash, are byproducts of the combustion of coal at power plants and are generally disposed of in liquid form at large surface impoundments and in solid form at landfills. As noted in the June 7, 2010 memo:

The purpose of this memorandum is to provide you with interim guidance to assist National Pollutant Discharge Elimination System (NPDES) permitting authorities to establish appropriate permit requirements for wastewater discharges from Flue Gas Desulfurization (FGD) systems and coal combustion residual (CCR) impoundments at Steam Electric Power Plants.

Because wastewater is not generated from coal combustion and because a coal combustion residual impoundment does not exist at BL England, guidance regarding coal combustion waste is not applicable.

Regarding guidance for FGD systems, the memo does cite that arsenic, mercury, and selenium have the potential to be present in FGD wastewater. These parameters have and continue to be regulated in the NPDES permit despite the fact that applicable effluent limitation guidelines do not specify limits for these parameters. A complete description of regulation of these and other toxic metals is included below in **Response 20**.

NJDEP recognizes that N.J.A.C. 7:14A-13.8 describes the need for ten data points for a proper statistical analysis. However, this paragraph is intended for limits derived based on existing effluent quality and not water quality based effluent limits.

## **Comment 20**

The Draft Permit sets inadequate technology based effluent limits at DSN 013A and DSN 014A which should be revised to reflect Best Available Technology for coal plants. The effluent passing through these outfalls contain a number of toxic metals including arsenic, selenium, and chromium.

EPA has not yet established effluent limitation guidelines for steam electric power generators that address the metals and other toxic pollutants found in coal combustion waste. The agency has announced its intention to revise the existing effluent limitation guidelines for power plants to address coal combustion waste pollutants, but this will take several more years. EPA last promulgated ELGs for the steam electric power generation industry in 1982. Since then, EPA has learned that the power sector is a significant discharger of toxic pollutants and the toxicity of these discharges is primarily driven by metals associated with coal combustion waste. EPA has

also made clear that the existing effluent limitation guidelines fail to control metals in coal combustion waste discharges. Thus, in 2009, EPA issued guidance for permit writers in which EPA restated its position that in the absence of an effluent guideline for those coal combustion waste pollutants, the Clean Water Act requires permitting authorities to conduct the “BPJ” analysis discussed above on a case-by-case basis for those pollutants in each permit.

In setting BAT effluent limits, NJDEP should look to the performance of other plants in the industry. The Merrimack power plant in New Hampshire uses a more effective treatment system that begins with a conventional chemical precipitation system but then adds on an advanced biological treatment system specifically to treat dissolved coal combustion waste metals like selenium. A comparison is as follows:

<b>Comparison of FGD Wastewater Effluent Limits at Merrimack and B.L. England</b>					
Pollutant (µg/L)	Merrimack		B.L. England		
	Monthly Average	Daily Maximum	Effluent Data (MOAV/DAMX)	Monthly Average	Daily Maximum
Arsenic	8	15	169	Report	Report
Cadmium	Report	50	not sampled	no limit	no limit
Chromium	Report	10	4/10	Report	200
Copper	8	16	5,300/48,000	Report	8,700
Lead	Report	100	not sampled	no limit	no limit
Selenium	10	19	40	Report	Report
Zinc	12	15	30/130	Report	1000

Because plants like Merrimack are meeting these limits, they are achievable and the technology leading to them is available at B.L. England. And other plants are surpassing even this level of achievement and eliminating all FGD wastewater discharge either through the use of vapor-compression evaporation systems or by fully recycling wastewater.

NJDEP cannot claim that improved treatment technologies as not “available” for DSNs 013A and 014A because some of the discharges routed through these outfalls will cease if the repowering is completed. Moreover, the wastewater treatment plant will not shut down as it will continue to operate even if the FGD scrubber is disconnected upon repowering. If NJDEP is concerned about the remaining life of the treatment plant in light of the repowering, the Department can set a compliance schedule for meeting more stringent effluent limits that take effect on the planned date of the repowering. Thus, B.L. England can choose to meet the effluent limit by repowering and eliminating the discharge, or in the alternative, by installing more advanced pollution controls. The attainment of zero discharge at some plants suggests that the best available technology standards is in fact zero meaning the complete elimination of all discharge.

## Response 20

As noted previously, DSN 014 consists of approximately 0.03 MGD of FGD wastewater which

is diverted to the on-site wastewater treatment plant. Other wastestreams that are routed to the on-site wastewater treatment plant include water from floor drains, deionizer water filters wastewater, charcoal filter backwash, demineralizer water, boiler blowdown and stormwater from the coal pile. Treatment consists of oil coalescence, equalization, polymer addition, two stage pH adjustment, flocculation, clarification, filtration and neutralization. As described above in Response 19, guidance regarding coal combustion waste does not apply to BL England. With respect to the FGD wastestream (DSN 014A), the Department maintains that the limits set in the 2013 Draft Permit are adequate and appropriate.

Many toxic pollutants are limited at DSN 013A and/or at DSN 014A. The information presented in this comment that compares the FGD wastewater at B.L. England to Merrimack does not match the data contained in the 2013 Draft Permit for this same outfall. A complete list of metals data and effluent limits at DSNs 013A and 014A for the parameters described in this comment are as follows:

<b>DSN 013A – Wastewater Treatment Plant</b>						
PARAMETER	UNITS	AVERAGING PERIOD	WASTEWATER DATA (3/2005-9/2012)	FINAL LIMITS	MONITORING FREQUENCY	SAMPLE TYPE
Total Recoverable Chromium	mg/L	Monthly Avg. Daily Max. # detect/# non-detect <b>% not detected</b>	0.004 0.01 4/38 <b>90%</b>	MR 0.2	1/Quarter	4-Hour Composite
Total Recoverable Zinc	mg/L	Monthly Avg. Daily Max. # detect/# non-detect <b>% not detected</b>	0.03 0.13 15/28 <b>65%</b>	MR 1.0	1/Quarter	4-Hour Composite
Total Recoverable Copper	mg/L	Monthly Avg. Daily Max. # detect/# non-detect <b>% not detected</b>	5.3 48 25/62 <b>71%</b>	MR 8.7	1/Quarter	4-Hour Composite
Total Recoverable Nickel	mg/L	Monthly Avg. Daily Max. # detect/# non-detect <b>% not detected</b>	0.011 0.04 9/35 <b>76%</b>	MR 1.0	1/Quarter	4-Hour Composite
Arsenic, Total Recoverable	µg/L	Monthly Avg. Daily Max. # detect/# non-detect <b>% not detected</b>	62.7 169 3/1 <b>25%</b>	MR MR	1/6 Months	4-Hour Composite
Selenium, Total Recoverable	µg/L	Monthly Avg. Daily Max. # detect/# non-detect <b>% not detected</b>	20.4 40 4/1 <b>20%</b>	MR MR	1/6 Months	4-Hour Composite

<b>DSN 014 – FGD Wastestream that is Diverted to Wastewater Treatment Plant</b> <b>Discharge will be eliminated upon repowering</b>						
PARAMETER	UNITS	AVERAGING PERIOD	WASTEWATER DATA (3/2005-9/2012)	FINAL LIMITS	MONITORING FREQUENCY	SAMPLE TYPE
Total Recoverable Arsenic	ug/L	Monthly Avg. Daily Max. # detect/# non-detect <b>% not detected</b>	26.11 112 27/37 <b>58%</b>	830 1700	1/Week	4-Hour Composite
Total Recoverable Copper	ug/L	Monthly Avg. Daily Max. # detect/# non-detect <b>% not detected</b>	65.95 500 13/52 <b>80%</b>	1700 3500	1/Week	4-Hour Composite
Total Recoverable Mercury	ug/L	Monthly Avg. Daily Max. # detect/# non-detect <b>% not detected</b>	0.22 1.6 12/53 <b>82%</b>	49 98	1/Week	4-Hour Composite
Total Recoverable Selenium	ug/L	Monthly Avg. Daily Max. # detect/# non-detect <b>% not detected</b>	40 50 2/2 <b>50%</b>	MR MR	1/6 Months	4-Hour Composite

A summary as to how each of the parameters referenced in the above table is regulated is as follows:

**Arsenic** – Arsenic is limited at the internal monitoring point DSN 014A and monitored at DSN 013A. Arsenic was NOT detected 58% of the time at DSN 014A.

**Cadmium** – Application data for Cadmium showed it was not detected at outfalls DSN 013A or DSN 014A. Regardless, cadmium is required to be monitored annually at DSN 013A. The EPA memo dated June 7, 2010 for FGD wastestreams does not recognize cadmium as a wastewater component.

**Chromium** – Chromium is limited at the internal monitoring point DSN 014A and monitored at DSN 013A. Chromium was NOT detected 90% of the time at DSN 014A. The EPA memo dated June 7, 2010 for FGD wastestreams does not recognize chromium as a wastewater component.

**Copper** – Copper is limited at the internal monitoring point DSN 014A as well as at DSN 013A. Copper is NOT detected 71% of the time at DSN 013A and NOT detected 80% of the time at DSN 014A. The EPA memo dated June 7, 2010 for FGD wastestreams does not recognize copper as a wastewater component.

**Lead** – Application data for Lead showed it was NOT detected at outfalls DSN 013A or DSN 014A. Regardless, lead is required to be monitored annually at DSN 013A. The EPA memo dated June 7, 2010 for FGD wastestreams does not recognize lead as a wastewater component.

**Mercury** – Application data for Mercury showed it was not detected at outfalls DSN 013A or DSN 014A. Mercury is not detected 82% of the time at DSN 014A. Mercury limits are applied at DSN 014A with weekly monitoring and annual monitoring is required at DSN 013A.

**Selenium** – Available data for Selenium showed it was detected in four of four samples at DSN 013A (12.6 ug/L; 5 ug/L; 24.3 ug/L and 40 ug/L) and in two of four samples at DSN 014 (29.7 ug/L and 50 ug/L). All results are below the NJSWQS of 71 ug/L. Selenium is required to be monitored semi-annually at DSN 013A and at DSN 014A.

**Zinc** – Zinc is limited at the internal monitoring point DSN 014A where it was NOT detected 65% of the time. Zinc was also not detected in the application data for DSN 013A and 014A. Regardless, zinc is required to be monitored annually at DSN 013A. The EPA memo dated June 7, 2010 for FGD wastestreams does not recognize zinc as a wastewater component.

In sum, the Department maintains that the effluent limits at DSNs 013A and 014A are appropriate and protective.

With respect to the suggestion that DSN 014 be required to have a “zero discharge,” because this discharge will be eliminated, this condition is being met. The remaining wastewater at DSN 013A will continue to be extensively treated and the effluent will be monitored.

## **Comment 21**

New Jersey’s antidegradation policy at N.J.A.C. 7:9B-1.5 states that existing uses of a waterbody shall be maintained and protected. Also, designated uses shall be maintained or, as soon as technically and economically feasible, be attained wherever these uses are not precluded by natural conditions. Further, at a minimum, even the most polluted waterbodies “shall be protected from any measurable changes (including calculable or predicted changes) to the existing water quality.” And under no circumstances can “water quality-based effluent limitations established to implement the water quality standards (which includes the antidegradation policies)” ever provide for effluent limits less stringent than required by federal law.

The Draft Permit violates the antidegradation policy in several ways. First, the failure to set water quality based effluent limits violates the state’s antidegradation policy because NJDEP has not analyzed whether the permit renewal will cause any measurable changes to the existing water quality. Increasing the temperature of the discharge at DSN010A in a manner that makes a larger portion of Great Egg Harbor Bay inimical to indigenous species violates the antidegradation policy for the same reasons. Most of all, the Draft Permit’s failure to require closed cycle cooling and the proposed 316(a) variance together allow B.L. England to continue discharging high volumes of heat and nutrients into an oxygen-impaired waterbody,. The designated uses of Great Egg Harbor Bay are not being attained for DO. NJDEP must conduct an antidegradation review and include in the administrative record a determination as to how the

permit comports with New Jersey's antidegradation policy.

### **Response 21**

This permit is consistent with NJDEP's antidegradation policy because all permit limitations and conditions are equal to or more stringent than those contained in the existing permit with the exception of temperature differential and effluent temperature at DSN 010A during June through August. The basis for the changes in these limits is discussed at length in **Response 13**.

Please refer to **Responses 9** and **10** regarding DO, **Responses 17** and **20** regarding WQBELs and **Responses 1** through **8** regarding closed-cycle cooling.

### **Comment 22**

The commentor requests that a public hearing be convened on this issue. The commentor also requests a meeting with Chief Patterson and staff of the Bureau of Surface Water Permitting.

### **Response 22**

NJDEP denied the request for a public hearing in a letter dated June 3, 2013 addressed to Reed W. Super of Super Law Group, LLC from Chief Pilar Patterson of the Bureau of Surface Water Permitting. As described in this letter, the regulatory criteria for holding a public hearing is set forth in the NJPDES Regulations at N.J.A.C. 7:14A-15.11. Pursuant to N.J.A.C. 7:14A-15.11(b):

A request for a public hearing shall be in writing and shall state the nature of the significant and relevant issues proposed to be raised in the hearing and why these issues cannot be adequately expressed other than at a public hearing.

N.J.A.C. 7:14A-15.12(a) further clarifies the criteria for holding public hearings by stating:

The Department shall hold a public hearing if there is or may be a significant degree of public interest in favor of holding a public hearing. The Department may hold a public hearing if it determines that a hearing is likely to clarify one or more legal and/or factual issues on a draft permit and that oral testimony is essential to adequately express all issues and concerns.

The April 26, 2013 submission is the only set of comments that were received on the NJPDES permit. Additionally, NJDEP did not receive any public comments on the associated air permit for the facility, namely the Significant Modification to the Title V Operating Permit. The public comment period for the air permit began on February 6, 2013 and ended on March 6, 2013. As a result, the Department has determined that there is not a "significant degree of public interest" in the NJPDES permit. In addition, as required by N.J.A.C. 7:14A-15.12(a), there was no

justification in the submittal as to why a public hearing was necessary and why written comments would not be sufficient in addressing the group's concerns.

Additionally, NJDEP participated in a conference call on June 13, 2013 with some of the commenters including Edan Rotenberg of Super Law Group, Alice Baker of the Eastern Environmental Law Center, and Edward Lloyd and Susan Kraham of the Environmental Law Clinic at Columbia University School of Law. Participants from NJDEP included Pilar Patterson and Susan Rosenwinkel of the Bureau of Surface Water Permitting; Assistant Director Janice Brogle and Director Michele Putnam of the Division of Water Quality; and Helene Chudzik of the Division of Law. The purpose of the call was to offer an opportunity for the commenters to describe their concerns.



# NEW JERSEY POLLUTANT DISCHARGE ELIMINATION SYSTEM

The New Jersey Department of Environmental Protection hereby grants you a NJPDES permit for the facility/activity named in this document. This permit is the regulatory mechanism used by the Department to help ensure your discharge will not harm the environment. By complying with the terms and conditions specified, you are assuming an important role in protecting New Jersey's valuable water resources. Your acceptance of this permit is an agreement to conform with all of its provisions when constructing, installing, modifying, or operating any facility for the collection, treatment, or discharge of pollutants to waters of the state. If you have any questions about this document, please feel free to contact the Department representative listed in the permit cover letter. Your cooperation in helping us protect and safeguard our state's environment is appreciated.

**Permit Number: NJ0005444**

**Final: Consolidated Renewal Permit Action**

**Permittee:**

RC Cape May Holdings LLC  
900 N Shore Rd  
Beesleys Point, NJ 08223

**Property Owner:**

RC Cape May Holdings LLC  
c/o Rockland Capital Energy  
2204 Timberlock Pl - Ste 190  
Investments  
The Woodlands, TX 77380

**Location Of Activity:**

B L England Generating Station  
900 N Shore Rd  
Upper Township, NJ  
Cape May County

Authorization(s) Covered Under This Approval	Issuance Date	Effective Date	Expiration Date
B -Industrial Wastewater RF -Stormwater	06/17/2013	08/01/2013	07/31/2018

**By Authority of:**  
**Commissioner's Office**

**DEP AUTHORIZATION**  
**Pilar Patterson, Chief**  
**Bureau of Surface Water Permitting**  
**Division of Water Quality**

(Terms, conditions and provisions attached hereto)

**Division of Water Quality**

## PART I GENERAL REQUIREMENTS: NJPDES

### A. General Requirements of all NJPDES Permits

#### 1. Requirements Incorporated by Reference

- a. The permittee shall comply with all conditions set forth in this permit and with all the applicable requirements incorporated into this permit by reference. The permittee is required to comply with the regulations, including those cited in paragraphs b. through e. following, which are in effect as of the effective date of the final permit.
- b. General Conditions
  - Penalties for Violations N.J.A.C. 7:14-8.1 et seq.
  - Incorporation by Reference N.J.A.C. 7:14A-2.3
  - Toxic Pollutants N.J.A.C. 7:14A-6.2(a)4i
  - Duty to Comply N.J.A.C. 7:14A-6.2(a)1 & 4
  - Duty to Mitigate N.J.A.C. 7:14A-6.2(a)5 & 11
  - Inspection and Entry N.J.A.C. 7:14A-2.11(e)
  - Enforcement Action N.J.A.C. 7:14A-2.9
  - Duty to Reapply N.J.A.C. 7:14A-4.2(e)3
  - Signatory Requirements for Applications and Reports N.J.A.C. 7:14A-4.9
  - Effect of Permit/Other Laws N.J.A.C. 7:14A-6.2(a)6 & 7 & 2.9(c)
  - Severability N.J.A.C. 7:14A-2.2
  - Administrative Continuation of Permits N.J.A.C. 7:14A-2.8
  - Permit Actions N.J.A.C. 7:14A-2.7(c)
  - Reopener Clause N.J.A.C. 7:14A-6.2(a)10
  - Permit Duration and Renewal N.J.A.C. 7:14A-2.7(a) & (b)
  - Consolidation of Permit Process N.J.A.C. 7:14A-15.5
  - Confidentiality N.J.A.C. 7:14A-18.2 & 2.11(g)
  - Fee Schedule N.J.A.C. 7:14A-3.1
  - Treatment Works Approval N.J.A.C. 7:14A-22 & 23
- c. Operation And Maintenance
  - Need to Halt or Reduce not a Defense N.J.A.C. 7:14A-2.9(b)
  - Proper Operation and Maintenance N.J.A.C. 7:14A-6.12
- d. Monitoring And Records
  - Monitoring N.J.A.C. 7:14A-6.5
  - Recordkeeping N.J.A.C. 7:14A-6.6
  - Signatory Requirements for Monitoring Reports N.J.A.C. 7:14A-6.9
- e. Reporting Requirements
  - Planned Changes N.J.A.C. 7:14A-6.7
  - Reporting of Monitoring Results N.J.A.C. 7:14A-6.8
  - Noncompliance Reporting
    - N.J.A.C. 7:14A-6.10 & 6.8(h)
    - Hotline/Two Hour & Twenty-four Hour Reporting N.J.A.C. 7:14A-6.10(c) & (d)
    - Written Reporting N.J.A.C. 7:14A-6.10(e) & (f) & 6.8(h)
  - Duty to Provide Information N.J.A.C. 7:14A-2.11, 6.2(a)14 & 18.1
  - Schedules of Compliance N.J.A.C. 7:14A-6.4
  - Transfer N.J.A.C. 7:14A-6.2(a)8 & 16.2

## **PART II**

### **GENERAL REQUIREMENTS: DISCHARGE CATEGORIES**

#### **A. Additional Requirements Incorporated By Reference**

##### **1. Requirements for Discharges to Surface Waters**

- a. In addition to conditions in Part I of this permit, the conditions in this section are applicable to activities at the permitted location and are incorporated by reference. The permittee is required to comply with the regulations which are in effect as of the effective date of the final permit.
  - i. Surface Water Quality Standards N.J.A.C. 7:9B-1
  - ii. Water Quality Management Planning Regulations N.J.A.C. 7:15

#### **B. General Conditions**

##### **1. Scope**

- a. The issuance of this permit shall not be considered as a waiver of any applicable federal, state, and local rules, regulations and ordinances.

##### **2. Permit Renewal Requirement**

- a. Permit conditions remain in effect and enforceable until and unless the permit is modified, renewed or revoked by the Department.
- b. Submit a complete permit renewal application: 180 days before the Expiration Date.

##### **3. Notification of Non-Compliance**

- a. The permittee shall notify the Department of all non-compliance when required in accordance with N.J.A.C. 7:14A-6.10 by contacting the DEP HOTLINE at 1-877-WARNDEP (1-877-927-6337).
- b. The permittee shall submit a written report as required by N.J.A.C. 7:14A-6.10 within five days.

##### **4. Notification of Changes**

- a. The permittee shall give written notification to the Department of any planned physical or operational alterations or additions to the permitted facility when the alteration is expected to result in a significant change in the permittee's discharge and/or residuals use or disposal practices including the cessation of discharge in accordance with N.J.A.C. 7:14A-6.7.
- b. Prior to any change in ownership, the current permittee shall comply with the requirements of N.J.A.C. 7:14A-16.2, pertaining to the notification of change in ownership.

##### **5. Access to Information**

- a. The permittee shall allow an authorized representative of the Department, upon the presentation of credentials, to enter upon a person's premises, for purposes of inspection, and to access / copy any records that must be kept under the conditions of this permit.

#### **6. Stormwater Discharge Authorization**

- a. The permittee shall discharge stormwater to surface waters and/or ground waters of the State only as authorized herein and consistent with the terms and conditions of this permit. This permit does not authorize any unpermitted discharge of domestic wastewater, non-contact cooling water, leachate, or process water, unless otherwise stated in Part IV of the Permit.

#### **7. Other Discharges**

- a. If, during or after the preparation of the SPPP, it is discovered that the facility generates and discharges to surface waters and/or ground water any domestic wastewater, non-contact cooling water, or process waste water (including leachate and cooling water), not authorized by this permit or any other NJPDES permit, the permittee shall discontinue such discharges and apply for the appropriate NJPDES DSW permit in accordance with the NJPDES rules at N.J.A.C. 7:14A.

#### **8. Operator Certification**

- a. For stormwater only discharges pursuant to N.J.A.C. 7:10A-1.10, the facility operator is exempt from the operator certification requirements unless otherwise required by this permit .

#### **9. Monitoring Locations**

- a. All samples shall be taken at the monitoring points specified in Part III of this permit and, unless otherwise specified, before the effluent joins or is diluted by any other waste stream, body of water or substance. Sampling points shall not be changed without notification to and the approval of the Department.

#### **10. Stormwater/Intermittent Discharges**

- a. The permittee is required to ensure that samples and measurements taken for the purposes of monitoring are representative of the monitored activity pursuant to N.J.A.C. 7:14A-6.5(a). This includes any regulated intermittent activity or discharge. Therefore, although a discharge may occur on an intermittent basis, it does not exempt the permittee from complying with the conditions of the permit. For example, if a permittee has a monthly monitoring and reporting requirement and the discharge occurs three separate times during the month, the permittee should obtain a sample during at least one of the discharge events occurring during the monitoring period.
  - i. The permittee should check "No Discharge this monitoring period" on the monitoring report transmittal sheet only if there are no discharge events during the entire reporting period.

#### **11. Removed Substances/Residuals**

- a. This permit does not authorize discharge of solids, sludge, filter backwash or other pollutants removed in the course of treatment or control to the waters of the State unless specifically authorized in this permit. All solids, sludge, filter backwash, or other pollutants removed from, or resulting from the treatment or control of discharges must be disposed of in accordance with all applicable Federal, State, Local and other appropriate agency requirements.

#### **12. Outfall Tagging and Monitoring Location Tagging**

- a. All permittees with discharges that flow through an outfall with a Discharge Serial Number (DSN), shall identify the outfall with an outfall tag or posted sign. The outfall tag or posted sign shall be:
  - i. legible from twenty-five (25) feet, with a minimum of one (1) inch lettering;

- ii. visible to the public from the land and water (if applicable)
  - iii. located as near to the end of the outfall as possible;
  - iv. made of durable, weather resistant material; and
  - v. maintained on a regular basis, such as cleaned and inspected to ensure that the tag is properly attached.
- b. The outfall tag shall display, at minimum, the following information:
- i. the name of the facility where the discharge originates;
  - ii. the NJPDES permit number;
  - iii. the Department Hotline phone number; and
  - iv. the DSN for that particular outfall.
- c. If the monitoring locations are different than the outfall locations, monitoring locations shall also be identified with a tag or posted sign. The tag or posted sign shall be:
- i. legible;
  - ii. made of durable, weather resistant material; and
  - iii. maintained on a regular basis, such as cleaned and inspected to ensure that the tag is properly attached.
- d. The monitoring location tag shall display, at minimum, the following information:
- i. the DSN.

### 13. Operator Certification

- a. Pursuant to N.J.A.C. 7:10A-1.1 et seq. every wastewater system not exempt pursuant to N.J.A.C. 7:10A-1.1(b) requires a licensed operator. The operator of a system shall meet the Department's requirements pursuant to N.J.A.C. 7:10A-1.1 and any amendments. The name of the proposed operator, where required shall be submitted to the Department at the address below, in order that his/her qualifications may be determined prior to initiating operation of the treatment works.
- i. Notifications shall be submitted to:  
NJDEP  
Examination and Licensing Unit  
P.O. Box 420 Mail Code 401-04E  
Trenton, New Jersey 08625-0420  
(609)777-1012.
- b. The permittee shall notify the Department of any changes in licensed operator within two weeks of the change.

### 14. Operation Restrictions

- a. The operation of a waste treatment or disposal facility shall at no time create: (a) a discharge, except as authorized by the Department in the manner and location specified in Part III of this permit; (b) any discharge to the waters of the state or any standing or ponded condition for water or waste, except as specifically authorized by a valid NJPDES permit.

**15. Residuals Management**

- a. The permittee shall comply with land-based sludge management criteria and shall conform with the requirements for the management of residuals and grit and screenings under N.J.A.C. 7:14A-6.15(a), which includes:
  - i. Standards for the Use or Disposal of Residual, N.J.A.C. 7:14A-20;
  - ii. Section 405 of the Federal Act governing the disposal of sludge from treatment works treating domestic sewage;
  - iii. The Solid Waste Management Act, N.J.S.A. 13:1E-1 et seq., and the Solid Waste Management Rules, N.J.A.C. 7:26;
  - iv. The Sludge Quality Assurance Regulations, N.J.A.C. 7:14C;
  - v. The Statewide Sludge Management Plan promulgated pursuant to the Water Quality Planning Act, N.J.S.A. 58:11A-1 et seq., and the Solid Waste Management Act, N.J.S.A. 13:1E-1 et seq.; and
  - vi. The provisions concerning disposal of sewage sludge and septage in sanitary landfills set forth at N.J.S.A. 13:1E-42 and the Statewide Sludge Management Plan.
  - vii. Residual that is disposed in a municipal solid waste landfill unit shall meet the requirements in 40 CFR Part 258 and/or N.J.A.C. 7:26 concerning the quality of residual disposed in a municipal solid waste landfill unit. (That is, passes the Toxicity Characteristic Leaching Procedure and does not contain "free liquids" as defined at N.J.A.C. 7:14A-1.2.)
- b. If any applicable standard for residual use or disposal is promulgated under section 405(d) of the Federal Act and Sections 4 and 6 of the State Act and that standard is more stringent than any limitation on the pollutant or practice in the permit, the Department may modify or revoke and reissue the permit to conform to the standard for residual use or disposal.
- c. The permittee shall make provisions for storage, or some other approved alternative management strategy, for anticipated downtimes at a primary residual management alternative. The permittee shall not be permitted to store residual beyond the capacity of the structural treatment and storage components of the treatment works. N.J.A.C. 7:14A-20.8(a) and N.J.A.C. 7:26 provide for the temporary storage of residuals for periods not exceeding six months, provided such storage does not cause pollutants to enter surface or ground waters of the State. The storage of residual for more than six months is not authorized under this permit. However, this prohibition does not apply to residual that remains on the land for longer than six months when the person who prepares the residual demonstrates that the land on which the residual remains is not a surface disposal site or landfill. The demonstration shall explain why residual must remain on the land for longer than six months prior to final use or disposal, discuss the approximate time period during which the residual shall be used or disposed and provide documentation of ultimate residual management arrangements. Said demonstration shall be in writing, be kept on file by the person who prepares residual, and submitted to the Department upon request.
- d. The permittee shall comply with the appropriate adopted District Solid Waste or Sludge Management Plan (which by definition in N.J.A.C. 7:14A-1.2 includes Generator Sludge Management Plans), unless otherwise specifically exempted by the Department.
- e. The preparer must notify and provide information necessary to comply with the N.J.A.C. 7:14A-20 land application requirements to the person who applies bulk residual to the land. This shall include, but not be limited to, the applicable recordkeeping requirements and certification statements of 40 CFR 503.17 as referenced at N.J.A.C. 7:14A-20.7(j).

- f. The preparer who provides biosolids to another person who further prepares the biosolids for application to the land must provide this person with notification and information necessary to comply with the N.J.A.C. 7:14A-20 land application requirements.
- g. Any person who prepares bulk residual in New Jersey that is applied to land in a State other than New Jersey shall comply with the requirement at N.J.A.C. 7:14A-20.7(b)1.ix to submit to the Department written proof of compliance with or satisfaction of all applicable statutes, regulations, and guidelines of the state in which land application will occur.

## PART III

# LIMITS AND MONITORING REQUIREMENTS

MONITORED LOCATION:  
001A SW Outfall DSN 001A

RECEIVING LOCATION:  
Great Egg Harbor Bay

DISCHARGE CATEGORY(IES):  
B - Industrial Wastewater

### Location Description

Effluent samples for DSN 001A shall be taken at the sampling station located at the boiler blowdown pipe prior to discharge via DSN 001A.

### Contributing Waste Types

Cooling tower blowdown

### Surface Water DMR Reporting Requirements:

Submit a Monthly DMR: Within twenty-five days after the end of every month beginning from the effective date of the permit (EDP)..

### Comments:

Monitoring for Chromium is only required if cooling tower additives that contain Chromium are used during the month specified on the monitoring report form. If cooling tower additives containing Chromium are not used during that month then the permittee shall report "CODE=N."

**Table III - A - 1: Surface Water DMR Limits and Monitoring Requirements**

**PHASE:** Final      **PHASE Start Date:** 08/01/2013      **PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Flow, In Conduit or Thru Treatment Plant	Effluent Gross Value	REPORT Monthly Average	REPORT Daily Maximum	MGD	*****	*****	*****	*****	Continuous	Calculated
January thru December	QL	***	***		***	***	***			
Flow, In Conduit or Thru Treatment Plant	Intake From Stream	REPORT Monthly Average	REPORT Daily Maximum	MGD	*****	*****	*****	*****	Continuous	Calculated
January thru December	QL	***	***		***	***	***			
pH	Effluent Gross Value	*****	*****	*****	6.0 Daily Minimum	*****	9.0 Daily Maximum	SU	2/Week	Grab
January thru December	QL	***	***		***	***	***			
pH	Intake From Stream	*****	*****	*****	REPORT Daily Minimum	*****	REPORT Daily Maximum	SU	2/Week	Grab
January thru December	QL	***	***		***	***	***			
Solids, Total Suspended	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	MG/L	1/Month	Grab
January thru December	QL	***	***		***	***	***			

**Surface Water DMR Reporting Requirements:**

Submit a Monthly DMR: Within twenty-five days after the end of every month beginning from the effective date of the permit (EDP)..

**Comments:**

Monitoring for Chromium is only required if cooling tower additives that contain Chromium are used during the month specified on the monitoring report form. If cooling tower additives containing Chromium are not used during that month then the permittee shall report "CODE=N."

**Table III - A - 1: Surface Water DMR Limits and Monitoring Requirements****PHASE:**Final**PHASE Start Date:** 08/01/2013**PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Solids, Total Suspended	Effluent Net Value	*****	*****	*****	*****	30 Monthly Average	100 Daily Maximum	MG/L	1/Month	Calculated
January thru December	QL	***	***		***	***	***			
Solids, Total Suspended	Intake From Stream	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	MG/L	1/Month	Grab
January thru December	QL	***	***		***	***	***			
LC50 Statre 96hr Acu Mysid Bahia	Effluent Gross Value	*****	*****	*****	REPORT Report Per Minimum	*****	*****	%EFFL	1/Year	Composite
January thru December	QL	***	***		***	***	***			
Chlorine Produced Oxidants	Effluent Gross Value	*****	*****	*****	*****	0.2 Monthly Average	0.5 Daily Maximum	MG/L	3/Week	Grab
January thru December	RQL	***	***		***	0.1	0.1			
Temperature, oC	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	DEG.C	Continuous	Metered
January thru December	QL	***	***		***	***	***			
Temperature, oC	Intake From Stream	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	DEG.C	Continuous	Metered
January thru December	QL	***	***		***	***	***			
Oxygen, Dissolved (DO)	Effluent Gross Value	*****	*****	*****	REPORT Instant Minimum	REPORT Daily Avg Minimum	*****	MG/L	1/Month	Grab
January thru December	QL	***	***		***	***	***			

**Surface Water DMR Reporting Requirements:**

Submit a Monthly DMR: Within twenty-five days after the end of every month beginning from the effective date of the permit (EDP)..

**Comments:**

Monitoring for Chromium is only required if cooling tower additives that contain Chromium are used during the month specified on the monitoring report form. If cooling tower additives containing Chromium are not used during that month then the permittee shall report "CODE=N."

**Table III - A - 1: Surface Water DMR Limits and Monitoring Requirements****PHASE:**Final**PHASE Start Date:** 08/01/2013**PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Carbon, Tot Organic (TOC)	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	MG/L	1/Month	Grab
January thru December	QL	***	***		***	***	***			
Net Rate of Addition of Heat	Effluent Gross Value	REPORT Monthly Average	50 Daily Maximum	MBTU/HR	*****	*****	*****	*****	1/Day	Calculated
January thru December	QL	***	***		***	***	***			
Selenium, Total Recoverable	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	UG/L	1/6 Months	Grab
January thru December	RQL	***	***		***	10	10			
Chromium, Total (as Cr)	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	MG/L	1/Month	Grab
January thru December	RQL	***	***		***	0.01	0.01			
Chromium, Total (as Cr)	Effluent Net Value	*****	*****	*****	*****	REPORT Monthly Average	0.2 Daily Maximum	MG/L	1/Month	Grab
January thru December	RQL	***	***		***	0.01	0.01			
Chromium, Total (as Cr)	Intake From Stream	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	MG/L	1/Month	Grab
January thru December	RQL	***	***		***	0.01	0.01			
Nickel, Total Recoverable	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	UG/L	1/6 Months	Grab
January thru December	RQL	***	***		***	10	10			

**Surface Water DMR Reporting Requirements:**

Submit a Monthly DMR: Within twenty-five days after the end of every month beginning from the effective date of the permit (EDP)..

**Comments:**

Monitoring for Chromium is only required if cooling tower additives that contain Chromium are used during the month specified on the monitoring report form. If cooling tower additives containing Chromium are not used during that month then the permittee shall report "CODE=N."

**Table III - A - 1: Surface Water DMR Limits and Monitoring Requirements****PHASE:**Final**PHASE Start Date:** 08/01/2013**PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Zinc, Total Recoverable	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	MG/L	1/Month	Grab
January thru December	RQL	***	***		***	0.03	0.03			
Zinc, Total Recoverable	Effluent Net Value	*****	*****	*****	*****	REPORT Monthly Average	1 Daily Maximum	MG/L	1/Month	Grab
January thru December	RQL	***	***		***	0.03	0.03			
Zinc, Total Recoverable	Intake From Stream	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	MG/L	1/Month	Grab
January thru December	RQL	***	***		***	0.03	0.03			
Copper, Total Recoverable	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	UG/L	1/6 Months	Grab
January thru December	RQL	***	***		***	10	10			

**Consolidated WCR - Annual Reporting Requirements:**

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

**Table III - A - 2: Consolidated WCR - Annual Limits and Monitoring Requirements****PHASE:** Final**PHASE Start Date:** 08/01/2013**PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Manganese, Total Recoverable	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Cyanide, Total (as CN)	Effluent Gross Value	REPORT RQL = 40	UG/L	Grab	January thru December
Arsenic, Total Recoverable (as As)	Effluent Gross Value	REPORT RQL = 8	UG/L	Grab	January thru December
Thallium, Total Recoverable	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Beryllium, Total Recoverable (as Be)	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
Barium, Total Recoverable (as Ba)	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
Silver, Total Recoverable	Effluent Gross Value	REPORT RQL = 2	UG/L	Grab	January thru December
Cadmium, Total Recoverable	Effluent Gross Value	REPORT RQL = 4	UG/L	Grab	January thru December
Lead, Total Recoverable	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Antimony, Total Recoverable	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
Mercury Total Recoverable	Effluent Gross Value	REPORT RQL = 1	UG/L	Grab	January thru December
Acenaphthylene	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Acenaphthene	Effluent Gross Value	REPORT RQL = 9.5	UG/L	Grab	January thru December
Anthracene	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Benzo(b)fluoranthene (3,4-benzo)	Effluent Gross Value	REPORT	UG/L	Grab	January thru December

**Consolidated WCR - Annual Reporting Requirements:**

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

**Table III - A - 2: Consolidated WCR - Annual Limits and Monitoring Requirements****PHASE:** Final**PHASE Start Date:** 08/01/2013**PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Benzo(k)fluoranthene	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
Benzo(a)pyrene	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
Bis(2-chloroethyl) ether	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Bis(2-chloroethoxy) methane	Effluent Gross Value	REPORT RQL = 26.5	UG/L	Grab	January thru December
Bis (2-chloroiso- propyl) ether	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Butyl benzyl phthalate	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
Chrysene	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
Diethyl phthalate	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Dimethyl phthalate	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
1,2-Diphenyl- hydrazine	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Fluoranthene	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Fluorene	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Hexachlorocyclo- pentadiene	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Hexachloroethane	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Indeno(1,2,3-cd)- pyrene	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December

**Consolidated WCR - Annual Reporting Requirements:**

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

**Table III - A - 2: Consolidated WCR - Annual Limits and Monitoring Requirements****PHASE:** Final**PHASE Start Date:** 08/01/2013**PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Isophorone	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
N-nitrosodi-n-propylamine	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
N-nitrosodiphenyl-amine	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
N-nitrosodimethyl-amine	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
Nitrobenzene	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Phenanthrene	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Pyrene	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
Benzo(ghi)perylene	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
Benzo(a)anthracene	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
1,2-Dichlorobenzene	Effluent Gross Value	REPORT RQL = 9	UG/L	Grab	January thru December
1,2,4-Trichloro-benzene	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Dibenzo(a,h)anthracene	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
1,3-Dichlorobenzene	Effluent Gross Value	REPORT RQL = 9	UG/L	Grab	January thru December
1,4-Dichlorobenzene	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
2-Chloronaphthalene	Effluent Gross Value	REPORT RQL = 9.5	UG/L	Grab	January thru December

**Consolidated WCR - Annual Reporting Requirements:**

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

**Table III - A - 2: Consolidated WCR - Annual Limits and Monitoring Requirements****PHASE:** Final**PHASE Start Date:** 08/01/2013**PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Di-n-octyl Phthalate	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
2,4-Dinitrotoluene	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
2,6-Dinitrotoluene	Effluent Gross Value	REPORT RQL = 9.5	UG/L	Grab	January thru December
3,3'-Dichloro-benzidine	Effluent Gross Value	REPORT RQL = 60	UG/L	Grab	January thru December
4-Bromophenyl phenyl ether	Effluent Gross Value	REPORT RQL = 9.5	UG/L	Grab	January thru December
Naphthalene	Effluent Gross Value	REPORT RQL = 8	UG/L	Grab	January thru December
Bis(2-ethylhexyl) phthalate	Effluent Gross Value	REPORT RQL = 30	UG/L	Grab	January thru December
Di-n-butyl phthalate	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
Benzidine	Effluent Gross Value	REPORT RQL = 50	UG/L	Grab	January thru December
Malathion	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Demeton	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Hexachlorobenzene	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Hexachlorobutadiene	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Mirex	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
1,3-Dichloropropene	Effluent Gross Value	REPORT RQL = 7	UG/L	Grab	January thru December

**Consolidated WCR - Annual Reporting Requirements:**

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

**Table III - A - 2: Consolidated WCR - Annual Limits and Monitoring Requirements****PHASE:** Final**PHASE Start Date:** 08/01/2013**PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
1,2,4,5-Tetrachloro-benzene	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
N-nitrosodiethyl-amine	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
N-nitrosopyrrolidine	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Carbon Tetrachloride	Effluent Gross Value	REPORT RQL = 6	UG/L	Grab	January thru December
1,2-Dichloroethane	Effluent Gross Value	REPORT RQL = 3	UG/L	Grab	January thru December
Bromoform	Effluent Gross Value	REPORT RQL = 8	UG/L	Grab	January thru December
Chloroform	Effluent Gross Value	REPORT RQL = 5	UG/L	Grab	January thru December
Toluene	Effluent Gross Value	REPORT RQL = 6	UG/L	Grab	January thru December
Benzene	Effluent Gross Value	REPORT RQL = 7	UG/L	Grab	January thru December
Acrolein	Effluent Gross Value	REPORT RQL = 50	UG/L	Grab	January thru December
Acrylonitrile	Effluent Gross Value	REPORT RQL = 50	UG/L	Grab	January thru December
Chlorobenzene	Effluent Gross Value	REPORT RQL = 6	UG/L	Grab	January thru December
Chlorodibromomethane	Effluent Gross Value	REPORT RQL = 6	UG/L	Grab	January thru December
Ethylbenzene	Effluent Gross Value	REPORT RQL = 6	UG/L	Grab	January thru December
Methyl Bromide	Effluent Gross Value	REPORT RQL = 9	UG/L	Grab	January thru December

**Consolidated WCR - Annual Reporting Requirements:**

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

**Table III - A - 2: Consolidated WCR - Annual Limits and Monitoring Requirements****PHASE:** Final**PHASE Start Date:** 08/01/2013**PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Methyl Chloride	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Methylene Chloride	Effluent Gross Value	REPORT RQL = 6	UG/L	Grab	January thru December
Tetrachloroethylene	Effluent Gross Value	REPORT RQL = 9	UG/L	Grab	January thru December
Trichlorofluoro- methane	Effluent Gross Value	REPORT RQL = 5	UG/L	Grab	January thru December
1,1-Dichloroethane	Effluent Gross Value	REPORT RQL = 23.5	UG/L	Grab	January thru December
1,1-Dichloroethylene	Effluent Gross Value	REPORT RQL = 6	UG/L	Grab	January thru December
1,1,1-Trichloro- ethane	Effluent Gross Value	REPORT RQL = 6	UG/L	Grab	January thru December
1,1,2-Trichloro- ethane	Effluent Gross Value	REPORT RQL = 6	UG/L	Grab	January thru December
1,1,2,2-Tetrachloro- ethane	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
1,2-Dichloropropane	Effluent Gross Value	REPORT RQL = 5	UG/L	Grab	January thru December
1,2-trans-Dichloro- ethylene	Effluent Gross Value	REPORT RQL = 4	UG/L	Grab	January thru December
2-Chloroethyl Vinyl Ether (Mixed)	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Bromodichloromethane	Effluent Gross Value	REPORT RQL = 5	UG/L	Grab	January thru December
Vinyl Chloride	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Trichloroethylene	Effluent Gross Value	REPORT RQL = 5	UG/L	Grab	January thru December

**Consolidated WCR - Annual Reporting Requirements:**

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

**Table III - A - 2: Consolidated WCR - Annual Limits and Monitoring Requirements****PHASE:** Final**PHASE Start Date:** 08/01/2013**PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Methoxychlor	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
N-Nitrosodi-n-butylamine	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Chloroethane	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Parachloro-m-cresol	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Parathion	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Phenols	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
2,4,5-Trichloro-phenol	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Delta BHC, Total (ug/l)	Effluent Gross Value	REPORT RQL = 0.02	UG/L	Grab	January thru December
Endosulfan Sulfate	Effluent Gross Value	REPORT RQL = 0.08	UG/L	Grab	January thru December
Beta Endosulfan	Effluent Gross Value	REPORT RQL = 0.04	UG/L	Grab	January thru December
Alpha Endosulfan	Effluent Gross Value	REPORT RQL = 0.02	UG/L	Grab	January thru December
Endrin Aldehyde	Effluent Gross Value	REPORT RQL = 0.1	UG/L	Grab	January thru December
PCB-1016 (Arochlor 1016)	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
2,3,7,8-Tetrachloro-dibenzo-p-dioxin	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
4,4'-DDT(p,p'-DDT)	Effluent Gross Value	REPORT RQL = 0.06	UG/L	Grab	January thru December

**Consolidated WCR - Annual Reporting Requirements:**

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

**Table III - A - 2: Consolidated WCR - Annual Limits and Monitoring Requirements**

PHASE: Final

PHASE Start Date: 08/01/2013

PHASE End Date:

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
4,4'-DDD(p,p'-DDD)	Effluent Gross Value	REPORT RQL = 0.04	UG/L	Grab	January thru December
4,4'-DDE(p,p'-DDE)	Effluent Gross Value	REPORT RQL = 0.04	UG/L	Grab	January thru December
Aldrin	Effluent Gross Value	REPORT RQL = 0.04	UG/L	Grab	January thru December
Alpha BHC	Effluent Gross Value	REPORT RQL = 0.02	UG/L	Grab	January thru December
Beta BHC	Effluent Gross Value	REPORT RQL = 0.04	UG/L	Grab	January thru December
Gamma BHC (lindane),	Effluent Gross Value	REPORT RQL = 0.03	UG/L	Grab	January thru December
Chlordane	Effluent Gross Value	REPORT RQL = 0.2	UG/L	Grab	January thru December
Dieldrin	Effluent Gross Value	REPORT RQL = 0.03	UG/L	Grab	January thru December
Endosulfans, Total (alpha and beta)	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Endrin	Effluent Gross Value	REPORT RQL = 0.04	UG/L	Grab	January thru December
Toxaphene	Effluent Gross Value	REPORT RQL = 1	UG/L	Grab	January thru December
Heptachlor	Effluent Gross Value	REPORT RQL = 0.02	UG/L	Grab	January thru December
Heptachlor Epoxide	Effluent Gross Value	REPORT RQL = 0.4	UG/L	Grab	January thru December
PCB-1221 (Arochlor 1221)	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
PCB-1232 (Arochlor 1232)	Effluent Gross Value	REPORT	UG/L	Grab	January thru December

**Consolidated WCR - Annual Reporting Requirements:**

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

**Table III - A - 2: Consolidated WCR - Annual Limits and Monitoring Requirements****PHASE:** Final**PHASE Start Date:** 08/01/2013**PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
PCB-1242 (Arochlor 1242)	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
PCB-1248 (Arochlor 1248)	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
PCB-1254 (Arochlor 1254)	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
PCB-1260 (Arochlor 1260)	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Polychlorinated Biphenyls (PCBs)	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Chlorpyrifos	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
2-Chlorophenol	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
2-Nitrophenol	Effluent Gross Value	REPORT RQL = 18	UG/L	Grab	January thru December
2,4-Dichlorophenol	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
2,4-Dimethylphenol	Effluent Gross Value	REPORT RQL = 13.5	UG/L	Grab	January thru December
2,4-Dinitrophenol	Effluent Gross Value	REPORT RQL = 40	UG/L	Grab	January thru December
2,4,6-Trichloro- phenol	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
4-Chlorophenyl phenyl ether	Effluent Gross Value	REPORT RQL = 21	UG/L	Grab	January thru December
4-Nitrophenol	Effluent Gross Value	REPORT RQL = 12	UG/L	Grab	January thru December
4,6-Dinitro-o-cresol	Effluent Gross Value	REPORT RQL = 60	UG/L	Grab	January thru December

**Consolidated WCR - Annual Reporting Requirements:**

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

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**Table III - A - 2: Consolidated WCR - Annual Limits and Monitoring Requirements****PHASE:** Final**PHASE Start Date:** 08/01/2013**PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Phenol Single Compound	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Pentachlorophenol	Effluent Gross Value	REPORT RQL = 30	UG/L	Grab	January thru December
Pentachlorobenzene	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Guthion	Effluent Gross Value	REPORT	UG/L	Grab	January thru December

MONITORED LOCATION:  
003A SW Outfall DSN 003ARECEIVING LOCATION:  
Great Egg Harbor BayDISCHARGE CATEGORY(IES):  
RF - Stormwater**Location Description**

Effluent samples for DSN 003A shall be taken via a grab sample prior to discharge.

**Contributing Waste Types**

Storm Water Runoff

**Surface Water DMR Reporting Requirements:**

Submit a Monthly DMR: Within twenty-five days after the end of every month beginning from the effective date of the permit (EDP)..

**Table III - B - 1: Surface Water DMR Limits and Monitoring Requirements****PHASE:** Final**PHASE Start Date:** 08/01/2013**PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Flow, In Conduit or Thru Treatment Plant	Effluent Gross Value	REPORT Monthly Average	REPORT Daily Maximum	MGD	*****	*****	*****	*****	1/Month	Calculated
January thru December	QL	***	***		***	***	***			
pH	Effluent Gross Value	*****	*****	*****	6.0 Daily Minimum	*****	9.0 Daily Maximum	SU	2/Month	Grab
January thru December	QL	***	***		***	***	***			
Solids, Total Suspended	Effluent Gross Value	*****	*****	*****	*****	30 Monthly Average	100 Daily Maximum	MG/L	2/Month	Grab
January thru December	QL	***	***		***	***	***			
Petroleum Hydrocarbons	Effluent Gross Value	*****	*****	*****	*****	10 Monthly Average	15 Daily Maximum	MG/L	2/Month	Grab
January thru December	QL	***	***		***	***	***			
Carbon, Tot Organic (TOC)	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	MG/L	1/Month	Grab
January thru December	QL	***	***		***	***	***			

**Surface Water DMR Reporting Requirements:**

Submit a Monthly DMR: Within twenty-five days after the end of every month beginning from the effective date of the permit (EDP)..

**Table III - B - 1: Surface Water DMR Limits and Monitoring Requirements****PHASE:** Final**PHASE Start Date:** 08/01/2013**PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Arsenic, Total Recoverable (as As)	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	0.136 Daily Maximum	UG/L	1/Quarter	Grab
	RQL	***	***		***	8	8			
Nickel, Total Recoverable	Effluent Gross Value	*****	*****	*****	*****	0.75 Monthly Average	1.5 Daily Maximum	MG/L	6/Year	Grab
	RQL	***	***		***	0.01	0.01			
Zinc, Total Recoverable	Effluent Gross Value	*****	*****	*****	*****	0.5 Monthly Average	1.0 Daily Maximum	MG/L	6/Year	Grab
	RQL	***	***		***	0.03	0.03			

**Consolidated WCR - Annual Reporting Requirements:**

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

**Table III - B - 2: Consolidated WCR - Annual Limits and Monitoring Requirements****PHASE:** Final**PHASE Start Date:** 08/01/2013**PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Manganese, Total Recoverable	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Cyanide, Total (as CN)	Effluent Gross Value	REPORT RQL = 40	UG/L	Grab	January thru December
Selenium, Total Recoverable	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Thallium, Total Recoverable	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Beryllium, Total Recoverable (as Be)	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
Barium, Total Recoverable (as Ba)	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
Silver, Total Recoverable	Effluent Gross Value	REPORT RQL = 2	UG/L	Grab	January thru December
Cadmium, Total Recoverable	Effluent Gross Value	REPORT RQL = 4	UG/L	Grab	January thru December
Lead, Total Recoverable	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Chromium, Total Recoverable	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Copper, Total Recoverable	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Antimony, Total Recoverable	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
Mercury Total Recoverable	Effluent Gross Value	REPORT RQL = 1	UG/L	Grab	January thru December

**Consolidated WCR - Annual Reporting Requirements:**

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

**Table III - B - 2: Consolidated WCR - Annual Limits and Monitoring Requirements**

**PHASE:** Final                      **PHASE Start Date:** 08/01/2013                      **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Phenols	Effluent Gross Value	REPORT	UG/L	Grab	January thru December

MONITORED LOCATION:

006A Stormwater

RECEIVING LOCATION:

Great Egg Harbor Bay

DISCHARGE CATEGORY(IES):

RF - Stormwater

**Location Description**

Effluent samples for DSN 006A shall be taken via a grab sample prior to discharge.

**Contributing Waste Types**

Storm Water Runoff

**Consolidated WCR - Annual Reporting Requirements:**

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

**Table III - C - 1: Consolidated WCR - Annual Limits and Monitoring Requirements****PHASE:** Final**PHASE Start Date:** 08/01/2013**PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Date of Storm Event	Effluent Gross Value	REPORT	MM/DD/YY	Calculated	January thru December
Time Storm Event Began	Effluent Gross Value	REPORT	STD TIME	Calculated	January thru December
Storm Event Duration	Effluent Gross Value	REPORT	# HOURS	Calculated	January thru December
Hours Since Last Storm Event	Effluent Gross Value	REPORT	# HOURS	Calculated	January thru December
Time of Sample Collection	Effluent Gross Value	REPORT	STD TIME	Calculated	January thru December
Rainfall Amount at Time of Sampling	Effluent Gross Value	REPORT	# INCHES	Calculated	January thru December
pH	Effluent Gross Value	REPORT	SU	Grab	January thru December
Solids, Total Suspended	Effluent Gross Value	REPORT	MG/L	Grab	January thru December
Oil and Grease	Effluent Gross Value	REPORT	MG/L	Grab	January thru December
Petrol Hydrocarbons, Total Recoverable	Effluent Gross Value	REPORT	MG/L	Grab-3	January thru December

**Consolidated WCR - Annual Reporting Requirements:**

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

**Table III - C - 1: Consolidated WCR - Annual Limits and Monitoring Requirements**

**PHASE:** Final                      **PHASE Start Date:** 08/01/2013                      **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Oxygen Demand,Chem. (High Level) (COD)	Effluent Gross Value	REPORT	MG/L	Grab	January thru December

MONITORED LOCATION:  
007A Stormwater

RECEIVING LOCATION:  
Great Egg Harbor Bay

DISCHARGE CATEGORY(IES):  
RF - Stormwater

**Location Description**

There are no monitoring requirements for this discharge.

**Contributing Waste Types**

Storm Water Runoff

**Requirements have not been defined for this Monitored Location.**

MONITORED LOCATION:  
009A SW Outfall DSN 009ARECEIVING LOCATION:  
Great Egg Harbor BayDISCHARGE CATEGORY(IES):  
B - Industrial Wastewater**Location Description**

Effluent samples for DSN 009A shall be taken at the sampling station for DSN 009A which is before mixing with DSN 010A in the discharge canal.

**Contributing Waste Types**

Steam Elec Cooling Water

**Surface Water DMR Reporting Requirements:**

Submit a Monthly DMR: Within twenty-five days after the end of every month beginning from the effective date of the permit (EDP)..

**Comments:**

The heat limits for DSN 009A and 010A shall apply to the sum of the heat contributions from both outfalls.

**Table III - E - 1: Surface Water DMR Limits and Monitoring Requirements****PHASE:** Final**PHASE Start Date:** 08/01/2013**PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Flow, In Conduit or Thru Treatment Plant	Effluent Gross Value	REPORT Monthly Average	REPORT Daily Maximum	MGD	*****	*****	*****	*****	Continuous	Calculated
January thru December	QL	***	***		***	***	***			
Flow, In Conduit or Thru Treatment Plant	Intake From Stream	REPORT Monthly Average	REPORT Daily Average	MGD	*****	*****	*****	*****	Continuous	Calculated
January thru December	QL	***	***		***	***	***			
pH	Effluent Gross Value	*****	*****	*****	6.0 Daily Minimum	*****	9.0 Daily Maximum	SU	3/Week	Grab
January thru December	QL	***	***		***	***	***			
pH	Intake From Stream	*****	*****	*****	REPORT Daily Minimum	*****	REPORT Daily Maximum	SU	3/Week	Grab
January thru December	QL	***	***		***	***	***			
Chlorine Produced Oxidants	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	0.2 Daily Maximum	MG/L	3/Week	Grab
January thru December	MDL	***	***		***	0.1	0.1			

**Surface Water DMR Reporting Requirements:**

Submit a Monthly DMR: Within twenty-five days after the end of every month beginning from the effective date of the permit (EDP)..

**Comments:**

The heat limits for DSN 009A and 010A shall apply to the sum of the heat contributions from both outfalls.

**Table III - E - 1: Surface Water DMR Limits and Monitoring Requirements****PHASE:** Final**PHASE Start Date:** 08/01/2013**PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Temperature, oC	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	38.3 Daily Maximum	DEG.C	Continuous	Metered
January thru December	QL	***	***		***	***	***			
Temperature, oC	Intake From Stream	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	DEG.C	Continuous	Metered
January thru December	QL	***	***		***	***	***			
Oxygen, Dissolved (DO)	Effluent Gross Value	*****	*****	*****	REPORT Instant Minimum	REPORT Daily Avg Minimum	*****	MG/L	1/Month	Grab
January thru December	QL	***	***		***	***	***			
Net Rate of Addition of Heat	Effluent Gross Value	REPORT Monthly Average	1530 Daily Maximum	MBTU/HR	*****	*****	*****	*****	1/Day	Calculated
January thru December	QL	***	***		***	***	***			
Temp. Difference, Summer (oC)	Effluent Net Value	*****	*****	*****	*****	REPORT Monthly Average	8.8 Daily Maximum	DEG.C	1/Day	Calculated
June thru August	QL	***	***		***	***	***			
Temp. Difference, Winter (oC)	Effluent Net Value	*****	*****	*****	*****	REPORT Monthly Average	19.3 Daily Maximum	DEG.C	1/Day	Calculated
September thru May	QL	***	***		***	***	***			

MONITORED LOCATION:  
010A SW Outfall DSN 010ARECEIVING LOCATION:  
Great Egg Harbor BayDISCHARGE CATEGORY(IES):  
B - Industrial Wastewater**Location Description**

Effluent samples for DSN 010A shall be taken at the sampling station for DSN 010A which is before mixing with DSN 009A in the discharge canal.

**Contributing Waste Types**

Steam Elec Cooling Water

**Consolidated DMR Reporting Requirements:**

Submit a Monthly DMR: Within twenty-five days after the end of every month beginning from the effective date of the permit (EDP)..

**Comments:**

The heat limits for DSN 009A and 010A shall apply to the sum of the heat contributions from both outfalls. The final phase applies under repowered conditions.

**Table III - F - 1: Consolidated DMR Limits and Monitoring Requirements**

PHASE: 1-Initial      PHASE Start Date: 08/01/2013      PHASE End Date: 07/31/2016

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Flow, In Conduit or Thru Treatment Plant	Effluent Gross Value	REPORT Monthly Average	REPORT Daily Maximum	MGD	*****	*****	*****	*****	Continuous	Calculated
January thru December	QL	***	***		***	***	***			
Flow, In Conduit or Thru Treatment Plant	Intake From Stream	REPORT Monthly Average	REPORT Daily Maximum	MGD	*****	*****	*****	*****	Continuous	Calculated
January thru December	QL	***	***		***	***	***			
pH	Effluent Gross Value	*****	*****	*****	6 Daily Minimum	*****	9 Daily Maximum	SU	3/Week	Grab
January thru December	QL	***	***		***	***	***			
pH	Intake From Stream	*****	*****	*****	REPORT Daily Minimum	*****	REPORT Daily Maximum	SU	3/Week	Grab
January thru December	QL	***	***		***	***	***			
Chlorine Produced Oxidants	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	0.2 Daily Maximum	MG/L	3/Week	Grab
January thru December	MDL	***	***		***	0.1	0.1			

**Consolidated DMR Reporting Requirements:**

Submit a Monthly DMR: Within twenty-five days after the end of every month beginning from the effective date of the permit (EDP)..

**Comments:**

The heat limits for DSN 009A and 010A shall apply to the sum of the heat contributions from both outfalls. The final phase applies under repowered conditions.

**Table III - F - 1: Consolidated DMR Limits and Monitoring Requirements**

**PHASE:** 1-Initial      **PHASE Start Date:** 08/01/2013      **PHASE End Date:** 07/31/2016

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Temperature, oC	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	38.3 Daily Maximum	DEG.C	Continuous	Metered
January thru December	QL	***	***		***	***	***			
Temperature, oC	Intake From Stream	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	DEG.C	Continuous	Metered
January thru December	QL	***	***		***	***	***			
Oxygen, Dissolved (DO)	Effluent Gross Value	*****	*****	*****	REPORT Instant Minimum	REPORT Daily Avg Minimum	*****	MG/L	1/Month	Grab
January thru December	QL	***	***		***	***	***			
Oxygen, Dissolved (DO)	Intake From Stream	*****	*****	*****	REPORT Instant Minimum	REPORT Daily Avg Minimum	*****	MG/L	1/Month	Grab
January thru December	QL	***	***		***	***	***			
Boron, Total (as B)	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	UG/L	1/6 Months	Grab
January thru December	QL	***	***		***	***	***			
Net Rate of Addition of Heat	Effluent Gross Value	REPORT Monthly Average	1530 Daily Maximum	MBTU/HR	*****	*****	*****	*****	1/Day	Calculated
January thru December	QL	***	***		***	***	***			
Temp. Difference, Summer (oC)	Effluent Net Value	*****	*****	*****	*****	REPORT Monthly Average	8.8 Daily Maximum	DEG.C	1/Day	Calculated
June thru August	QL	***	***		***	***	***			

**Consolidated DMR Reporting Requirements:**

Submit a Monthly DMR: Within twenty-five days after the end of every month beginning from the effective date of the permit (EDP)..

**Comments:**

The heat limits for DSN 009A and 010A shall apply to the sum of the heat contributions from both outfalls. The final phase applies under repowered conditions.

**Table III - F - 1: Consolidated DMR Limits and Monitoring Requirements**

PHASE: 1-Initial PHASE Start Date: 08/01/2013 PHASE End Date: 07/31/2016

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Temp. Difference, Winter (oC)	Effluent Net Value	*****	*****	*****	*****	REPORT Monthly Average	19.3 Daily Maximum	DEG.C	1/Day	Calculated
September thru May	QL	***	***		***	***	***			
Arsenic, Total Recoverable (as As)	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	UG/L	1/6 Months	Grab
January thru December	QL	***	***		***	***	***			

**Table III - F - 2: Consolidated DMR Limits and Monitoring Requirements**

PHASE: 2-Final (Repowered) PHASE Start Date: 08/01/2016 PHASE End Date:

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Flow, In Conduit or Thru Treatment Plant	Effluent Gross Value	REPORT Monthly Average	REPORT Daily Maximum	MGD	*****	*****	*****	*****	Continuous	Calculated
January thru December	QL	***	***		***	***	***			
Flow, In Conduit or Thru Treatment Plant	Intake From Stream	REPORT Monthly Average	REPORT Daily Maximum	MGD	*****	*****	*****	*****	Continuous	Calculated
January thru December	QL	***	***		***	***	***			
pH	Effluent Gross Value	*****	*****	*****	6 Daily Minimum	*****	9 Daily Maximum	SU	3/Week	Grab
January thru December	QL	***	***		***	***	***			

**Consolidated DMR Reporting Requirements:**

Submit a Monthly DMR: Within twenty-five days after the end of every month beginning from the effective date of the permit (EDP)..

**Comments:**

The heat limits for DSN 009A and 010A shall apply to the sum of the heat contributions from both outfalls. The final phase applies under repowered conditions.

**Table III - F - 2: Consolidated DMR Limits and Monitoring Requirements**

**PHASE: 2-Final (Repowered) PHASE Start Date: 08/01/2016 PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
pH	Intake From Stream	*****	*****	*****	REPORT Daily Minimum	*****	REPORT Daily Maximum	SU	3/Week	Grab
January thru December	QL	***	***		***	***	***			
Chlorine Produced Oxidants	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	0.2 Daily Maximum	MG/L	3/Week	Grab
January thru December	MDL	***	***		***	0.1	0.1			
Temperature, oC	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	40.5 Daily Maximum	DEG.C	Continuous	Metered
January thru December	QL	***	***		***	***	***			
Temperature, oC	Intake From Stream	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	DEG.C	Continuous	Metered
January thru December	QL	***	***		***	***	***			
Oxygen, Dissolved (DO)	Effluent Gross Value	*****	*****	*****	REPORT Instant Minimum	REPORT Daily Avg Minimum	*****	MG/L	1/Month	Grab
January thru December	QL	***	***		***	***	***			
Oxygen, Dissolved (DO)	Intake From Stream	*****	*****	*****	REPORT Instant Minimum	REPORT Daily Avg Minimum	*****	MG/L	1/Month	Grab
January thru December	QL	***	***		***	***	***			
Boron, Total (as B)	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	UG/L	1/6 Months	Grab
January thru December	QL	***	***		***	***	***			

**Consolidated DMR Reporting Requirements:**

Submit a Monthly DMR: Within twenty-five days after the end of every month beginning from the effective date of the permit (EDP)..

**Comments:**

The heat limits for DSN 009A and 010A shall apply to the sum of the heat contributions from both outfalls. The final phase applies under repowered conditions.

**Table III - F - 2: Consolidated DMR Limits and Monitoring Requirements**

**PHASE: 2-Final (Repowered) PHASE Start Date: 08/01/2016 PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Net Rate of Addition of Heat	Effluent Gross Value	REPORT Monthly Average	1530 Daily Maximum	MBTU/HR	*****	*****	*****	*****	1/Day	Calculated
January thru December	QL	***	***		***	***	***			
Temp. Difference, Summer (oC)	Effluent Net Value	*****	*****	*****	*****	REPORT Monthly Average	11.0 Daily Maximum	DEG.C	1/Day	Calculated
June thru August	QL	***	***		***	***	***			
Temp. Difference, Winter (oC)	Effluent Net Value	*****	*****	*****	*****	REPORT Monthly Average	19.3 Daily Maximum	DEG.C	1/Day	Calculated
September thru May	QL	***	***		***	***	***			
Arsenic, Total Recoverable (as As)	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	UG/L	1/6 Months	Grab
January thru December	QL	***	***		***	***	***			

**Consolidated WCR - Annual Reporting Requirements:**

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

**Table III - F - 3: Consolidated WCR - Annual Limits and Monitoring Requirements**

PHASE: Final

PHASE Start Date: 08/01/2013

PHASE End Date:

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Manganese, Total Recoverable	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Cyanide, Total (as CN)	Effluent Gross Value	REPORT RQL = 40	UG/L	Grab	January thru December
Selenium, Total Recoverable	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Thallium, Total Recoverable	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Beryllium, Total Recoverable (as Be)	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
Barium, Total Recoverable (as Ba)	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
Nickel, Total Recoverable	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Silver, Total Recoverable	Effluent Gross Value	REPORT RQL = 2	UG/L	Grab	January thru December
Zinc, Total Recoverable	Effluent Gross Value	REPORT RQL = 30	UG/L	Grab	January thru December
Cadmium, Total Recoverable	Effluent Gross Value	REPORT RQL = 4	UG/L	Grab	January thru December
Lead, Total Recoverable	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Chromium, Total Recoverable	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Copper, Total Recoverable	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Antimony, Total Recoverable	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
Mercury Total Recoverable	Effluent Gross Value	REPORT RQL = 1	UG/L	Grab	January thru December

**Consolidated WCR - Annual Reporting Requirements:**

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

**Table III - F - 3: Consolidated WCR - Annual Limits and Monitoring Requirements****PHASE:** Final**PHASE Start Date:** 08/01/2013**PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Acenaphthylene	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Acenaphthene	Effluent Gross Value	REPORT RQL = 9.5	UG/L	Grab	January thru December
Anthracene	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Benzo(b)fluoranthene (3,4-benzo)	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Benzo(k)fluoranthene	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
Benzo(a)pyrene	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
Bis(2-chloroethyl) ether	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Bis(2-chloroethoxy) methane	Effluent Gross Value	REPORT RQL = 26.5	UG/L	Grab	January thru December
Bis (2-chloroiso- propyl) ether	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Butyl benzyl phthalate	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
Chrysene	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
Diethyl phthalate	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Dimethyl phthalate	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
1,2-Diphenyl- hydrazine	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Fluoranthene	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December

**Consolidated WCR - Annual Reporting Requirements:**

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

**Table III - F - 3: Consolidated WCR - Annual Limits and Monitoring Requirements**

PHASE: Final

PHASE Start Date: 08/01/2013

PHASE End Date:

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Fluorene	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Hexachlorocyclopentadiene	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Hexachloroethane	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Indeno(1,2,3-cd)-pyrene	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
Isophorone	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
N-nitrosodi-n-propylamine	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
N-nitrosodiphenylamine	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
N-nitrosodimethylamine	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
Nitrobenzene	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Phenanthrene	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Pyrene	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
Benzo(ghi)perylene	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
Benzo(a)anthracene	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
1,2-Dichlorobenzene	Effluent Gross Value	REPORT RQL = 9	UG/L	Grab	January thru December
1,2,4-Trichlorobenzene	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December

**Consolidated WCR - Annual Reporting Requirements:**

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

**Table III - F - 3: Consolidated WCR - Annual Limits and Monitoring Requirements****PHASE:** Final**PHASE Start Date:** 08/01/2013**PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Dibenzo(a,h) anthracene	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
1,3-Dichlorobenzene	Effluent Gross Value	REPORT RQL = 9	UG/L	Grab	January thru December
1,4-Dichlorobenzene	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
2-Chloronaphthalene	Effluent Gross Value	REPORT RQL = 9.5	UG/L	Grab	January thru December
Di-n-octyl Phthalate	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
2,4-Dinitrotoluene	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
2,6-Dinitrotoluene	Effluent Gross Value	REPORT RQL = 9.5	UG/L	Grab	January thru December
3,3'-Dichloro-benzidine	Effluent Gross Value	REPORT RQL = 60	UG/L	Grab	January thru December
4-Bromophenyl phenyl ether	Effluent Gross Value	REPORT RQL = 9.5	UG/L	Grab	January thru December
Naphthalene	Effluent Gross Value	REPORT RQL = 8	UG/L	Grab	January thru December
Bis(2-ethylhexyl) phthalate	Effluent Gross Value	REPORT RQL = 30	UG/L	Grab	January thru December
Di-n-butyl phthalate	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
Benzdine	Effluent Gross Value	REPORT RQL = 50	UG/L	Grab	January thru December
Malathion	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Demeton	Effluent Gross Value	REPORT	UG/L	Grab	January thru December

**Consolidated WCR - Annual Reporting Requirements:**

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

**Table III - F - 3: Consolidated WCR - Annual Limits and Monitoring Requirements****PHASE:** Final**PHASE Start Date:** 08/01/2013**PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Hexachlorobenzene	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Hexachlorobutadiene	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Mirex	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
1,3-Dichloropropene	Effluent Gross Value	REPORT RQL = 7	UG/L	Grab	January thru December
1,2,4,5-Tetrachloro-benzene	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
N-nitrosodiethyl-amine	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
N-nitrosopyrrolidine	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Carbon Tetrachloride	Effluent Gross Value	REPORT RQL = 6	UG/L	Grab	January thru December
1,2-Dichloroethane	Effluent Gross Value	REPORT RQL = 3	UG/L	Grab	January thru December
Bromoform	Effluent Gross Value	REPORT RQL = 8	UG/L	Grab	January thru December
Chloroform	Effluent Gross Value	REPORT RQL = 5	UG/L	Grab	January thru December
Toluene	Effluent Gross Value	REPORT RQL = 6	UG/L	Grab	January thru December
Benzene	Effluent Gross Value	REPORT RQL = 7	UG/L	Grab	January thru December
Acrolein	Effluent Gross Value	REPORT RQL = 50	UG/L	Grab	January thru December
Acrylonitrile	Effluent Gross Value	REPORT RQL = 50	UG/L	Grab	January thru December

**Consolidated WCR - Annual Reporting Requirements:**

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

**Table III - F - 3: Consolidated WCR - Annual Limits and Monitoring Requirements****PHASE:** Final**PHASE Start Date:** 08/01/2013**PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Chlorobenzene	Effluent Gross Value	REPORT RQL = 6	UG/L	Grab	January thru December
Chlorodibromomethane	Effluent Gross Value	REPORT RQL = 6	UG/L	Grab	January thru December
Ethylbenzene	Effluent Gross Value	REPORT RQL = 6	UG/L	Grab	January thru December
Methyl Bromide	Effluent Gross Value	REPORT RQL = 9	UG/L	Grab	January thru December
Methyl Chloride	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Methylene Chloride	Effluent Gross Value	REPORT RQL = 6	UG/L	Grab	January thru December
Tetrachloroethylene	Effluent Gross Value	REPORT RQL = 9	UG/L	Grab	January thru December
Trichlorofluoro-methane	Effluent Gross Value	REPORT RQL = 5	UG/L	Grab	January thru December
1,1-Dichloroethane	Effluent Gross Value	REPORT RQL = 23.5	UG/L	Grab	January thru December
1,1-Dichloroethylene	Effluent Gross Value	REPORT RQL = 6	UG/L	Grab	January thru December
1,1,1-Trichloro-ethane	Effluent Gross Value	REPORT RQL = 6	UG/L	Grab	January thru December
1,1,2-Trichloro-ethane	Effluent Gross Value	REPORT RQL = 6	UG/L	Grab	January thru December
1,1,2,2-Tetrachloro-ethane	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
1,2-Dichloropropane	Effluent Gross Value	REPORT RQL = 5	UG/L	Grab	January thru December
1,2-trans-Dichloro-ethylene	Effluent Gross Value	REPORT RQL = 4	UG/L	Grab	January thru December

**Consolidated WCR - Annual Reporting Requirements:**

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

**Table III - F - 3: Consolidated WCR - Annual Limits and Monitoring Requirements****PHASE:** Final**PHASE Start Date:** 08/01/2013**PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
2-Chloroethyl Vinyl Ether (Mixed)	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Bromodichloromethane	Effluent Gross Value	REPORT RQL = 5	UG/L	Grab	January thru December
Vinyl Chloride	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Trichloroethylene	Effluent Gross Value	REPORT RQL = 5	UG/L	Grab	January thru December
Methoxychlor	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
N-Nitrosodi-n-butylamine	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Chloroethane	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Parachloro-m-cresol	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Parathion	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Phenols	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
2,4,5-Trichloro-phenol	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Delta BHC, Total (ug/l)	Effluent Gross Value	REPORT RQL = 0.02	UG/L	Grab	January thru December
Endosulfan Sulfate	Effluent Gross Value	REPORT RQL = 0.08	UG/L	Grab	January thru December
Beta Endosulfan	Effluent Gross Value	REPORT RQL = 0.04	UG/L	Grab	January thru December
Alpha Endosulfan	Effluent Gross Value	REPORT RQL = 0.02	UG/L	Grab	January thru December

**Consolidated WCR - Annual Reporting Requirements:**

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

**Table III - F - 3: Consolidated WCR - Annual Limits and Monitoring Requirements****PHASE:** Final**PHASE Start Date:** 08/01/2013**PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Endrin Aldehyde	Effluent Gross Value	REPORT RQL = 0.1	UG/L	Grab	January thru December
PCB-1016 (Arochlor 1016)	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
2,3,7,8-Tetrachloro- dibenzo-p-dioxin	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
4,4'-DDT(p,p'-DDT)	Effluent Gross Value	REPORT RQL = 0.06	UG/L	Grab	January thru December
4,4'-DDD(p,p'-DDD)	Effluent Gross Value	REPORT RQL = 0.04	UG/L	Grab	January thru December
4,4'-DDE(p,p'-DDE)	Effluent Gross Value	REPORT RQL = 0.04	UG/L	Grab	January thru December
Aldrin	Effluent Gross Value	REPORT RQL = 0.04	UG/L	Grab	January thru December
Alpha BHC	Effluent Gross Value	REPORT RQL = 0.02	UG/L	Grab	January thru December
Beta BHC	Effluent Gross Value	REPORT RQL = 0.04	UG/L	Grab	January thru December
Gamma BHC (lindane),	Effluent Gross Value	REPORT RQL = 0.03	UG/L	Grab	January thru December
Chlordane	Effluent Gross Value	REPORT RQL = 0.2	UG/L	Grab	January thru December
Dieldrin	Effluent Gross Value	REPORT RQL = 0.03	UG/L	Grab	January thru December
Endosulfans, Total (alpha and beta)	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Endrin	Effluent Gross Value	REPORT RQL = 0.04	UG/L	Grab	January thru December
Toxaphene	Effluent Gross Value	REPORT RQL = 1	UG/L	Grab	January thru December

**Consolidated WCR - Annual Reporting Requirements:**

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

**Table III - F - 3: Consolidated WCR - Annual Limits and Monitoring Requirements**

PHASE: Final

PHASE Start Date: 08/01/2013

PHASE End Date:

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Heptachlor	Effluent Gross Value	REPORT RQL = 0.02	UG/L	Grab	January thru December
Heptachlor Epoxide	Effluent Gross Value	REPORT RQL = 0.4	UG/L	Grab	January thru December
PCB-1221 (Arochlor 1221)	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
PCB-1232 (Arochlor 1232)	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
PCB-1242 (Arochlor 1242)	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
PCB-1248 (Arochlor 1248)	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
PCB-1254 (Arochlor 1254)	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
PCB-1260 (Arochlor 1260)	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Polychlorinated Biphenyls (PCBs)	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Chlorpyrifos	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
2-Chlorophenol	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
2-Nitrophenol	Effluent Gross Value	REPORT RQL = 18	UG/L	Grab	January thru December
2,4-Dichlorophenol	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
2,4-Dimethylphenol	Effluent Gross Value	REPORT RQL = 13.5	UG/L	Grab	January thru December
2,4-Dinitrophenol	Effluent Gross Value	REPORT RQL = 40	UG/L	Grab	January thru December

**Consolidated WCR - Annual Reporting Requirements:**

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

**Table III - F - 3: Consolidated WCR - Annual Limits and Monitoring Requirements****PHASE:** Final**PHASE Start Date:** 08/01/2013**PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
2,4,6-Trichloro-phenol	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
4-Chlorophenyl phenyl ether	Effluent Gross Value	REPORT RQL = 21	UG/L	Grab	January thru December
4-Nitrophenol	Effluent Gross Value	REPORT RQL = 12	UG/L	Grab	January thru December
4,6-Dinitro-o-cresol	Effluent Gross Value	REPORT RQL = 60	UG/L	Grab	January thru December
Phenol Single Compound	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Pentachlorophenol	Effluent Gross Value	REPORT RQL = 30	UG/L	Grab	January thru December
Pentachlorobenzene	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Guthion	Effluent Gross Value	REPORT	UG/L	Grab	January thru December

**MONITORED LOCATION:**  
013A SW Outfall DSN 013A**RECEIVING LOCATION:**  
Great Egg Harbor Bay**DISCHARGE CATEGORY(IES):**  
B - Industrial Wastewater**Location Description**

Effluent samples for DSN 013A shall be taken at the sampling station for DSN 013A which is after the last stage of treatment prior to discharge through the pipe identified as DSN 013A.

**Contributing Waste Types**

Process Water

**Surface Water DMR Reporting Requirements:**

Submit a Monthly DMR: Within twenty-five days after the end of every month beginning from the effective date of the permit (EDP)..

**Table III - G - 1: Surface Water DMR Limits and Monitoring Requirements****PHASE:** Final**PHASE Start Date:** 08/01/2013**PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Flow, In Conduit or Thru Treatment Plant	Effluent Gross Value	REPORT Monthly Average	REPORT Daily Maximum	MGD	*****	*****	*****	*****	Continuous	Metered
January thru December	QL	***	***		***	***	***			
pH	Effluent Gross Value	*****	*****	*****	6.0 Daily Minimum	*****	9.0 Daily Maximum	SU	Continuous	Metered
January thru December	QL	***	***		***	***	***			
Solids, Total Suspended	Effluent Gross Value	*****	*****	*****	*****	30 Monthly Average	100 Daily Maximum	MG/L	2/Month	4 Hour Composite
January thru December	QL	***	***		***	***	***			
LC50 Statre 96hr Acu Mysid Bahia	Effluent Gross Value	*****	*****	*****	REPORT Report Per Minimum	*****	*****	%EFFL	1/Year	Composite
January thru December	AL	***	***		50	***	***			

**Surface Water DMR Reporting Requirements:**

Submit a Monthly DMR: Within twenty-five days after the end of every month beginning from the effective date of the permit (EDP)..

**Table III - G - 1: Surface Water DMR Limits and Monitoring Requirements****PHASE:** Final**PHASE Start Date:** 08/01/2013**PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Oxygen, Dissolved (DO)	Effluent Gross Value	*****	*****	*****	4.0 Instant Minimum	5.0 Daily Avg Minimum	*****	MG/L	1/Month	Grab
	QL	***	***		***	***	***			
Petroleum Hydrocarbons	Effluent Gross Value	*****	*****	*****	*****	10 Monthly Average	15 Daily Maximum	MG/L	2/Month	Grab
	QL	***	***		***	***	***			
Carbon, Tot Organic (TOC)	Effluent Gross Value	REPORT Monthly Average	REPORT Daily Maximum	KG/DAY	*****	21 Monthly Average	REPORT Daily Maximum	MG/L	1/Month	Grab
	QL	***	***		***	***	***			
Selenium, Total Recoverable	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	UG/L	1/6 Months	4 Hour Composite
	RQL	***	***		***	***	8			
Arsenic, Total (as As)	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	UG/L	1/6 Months	4 Hour Composite
	RQL	***	***		***	***	10			
Iron, Total (as Fe)	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	1.0 Daily Maximum	MG/L	1/Quarter	4 Hour Composite
	QL	***	***		***	***	***			
Nickel, Total Recoverable	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	1.0 Daily Maximum	MG/L	1/Quarter	4 Hour Composite
	RQL	***	***		***	***	0.01			

**Surface Water DMR Reporting Requirements:**

Submit a Monthly DMR: Within twenty-five days after the end of every month beginning from the effective date of the permit (EDP)..

**Table III - G - 1: Surface Water DMR Limits and Monitoring Requirements****PHASE:**Final**PHASE Start Date:** 08/01/2013**PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Zinc, Total Recoverable  January thru December	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	1.0 Daily Maximum	MG/L	1/Quarter	4 Hour Composite
	RQL	***	***		***	***	0.03			
Chromium, Total Recoverable  January thru December	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	0.2 Daily Maximum	MG/L	1/Quarter	4 Hour Composite
	RQL	***	***		***	***	0.01			
Copper, Total Recoverable  January thru December	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	8.7 Daily Maximum	UG/L	1/Month	4 Hour Composite
	RQL	***	***		***	***	10			

**Consolidated WCR - Annual Reporting Requirements:**

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

**Table III - G - 2: Consolidated WCR - Annual Limits and Monitoring Requirements****PHASE:** Final**PHASE Start Date:** 08/01/2013**PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Manganese, Total Recoverable	Effluent Gross Value	REPORT	UG/L	4 Hour Composite	January thru December
Cyanide, Total (as CN)	Effluent Gross Value	REPORT RQL = 40	UG/L	Grab	January thru December
Thallium, Total Recoverable	Effluent Gross Value	REPORT RQL = 10	UG/L	4 Hour Composite	January thru December
Beryllium, Total Recoverable (as Be)	Effluent Gross Value	REPORT RQL = 20	UG/L	4 Hour Composite	January thru December
Barium, Total Recoverable (as Ba)	Effluent Gross Value	REPORT RQL = 20	UG/L	4 Hour Composite	January thru December
Silver, Total Recoverable	Effluent Gross Value	REPORT RQL = 2	UG/L	4 Hour Composite	January thru December
Cadmium, Total Recoverable	Effluent Gross Value	REPORT RQL = 4	UG/L	4 Hour Composite	January thru December
Lead, Total Recoverable	Effluent Gross Value	REPORT RQL = 10	UG/L	4 Hour Composite	January thru December
Chromium, Hexavalent Dissolved (as Cr)	Effluent Gross Value	REPORT	UG/L	4 Hour Composite	January thru December
Antimony, Total Recoverable	Effluent Gross Value	REPORT RQL = 20	UG/L	4 Hour Composite	January thru December
Mercury Total Recoverable	Effluent Gross Value	REPORT RQL = 1	UG/L	4 Hour Composite	January thru December
Acenaphthylene	Effluent Gross Value	REPORT RQL = 10	UG/L	4 Hour Composite	January thru December
Acenaphthene	Effluent Gross Value	REPORT RQL = 9.5	UG/L	4 Hour Composite	January thru December
Anthracene	Effluent Gross Value	REPORT RQL = 10	UG/L	4 Hour Composite	January thru December
Benzo(b)fluoranthene (3,4-benzo)	Effluent Gross Value	REPORT	UG/L	4 Hour Composite	January thru December

**Consolidated WCR - Annual Reporting Requirements:**

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

**Table III - G - 2: Consolidated WCR - Annual Limits and Monitoring Requirements****PHASE:** Final**PHASE Start Date:** 08/01/2013**PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Benzo(k)fluoranthene	Effluent Gross Value	REPORT RQL = 20	UG/L	4 Hour Composite	January thru December
Benzo(a)pyrene	Effluent Gross Value	REPORT RQL = 20	UG/L	4 Hour Composite	January thru December
Bis(2-chloroethyl) ether	Effluent Gross Value	REPORT RQL = 10	UG/L	4 Hour Composite	January thru December
Bis(2-chloroethoxy) methane	Effluent Gross Value	REPORT RQL = 26.5	UG/L	4 Hour Composite	January thru December
Bis (2-chloroiso-propyl) ether	Effluent Gross Value	REPORT RQL = 10	UG/L	4 Hour Composite	January thru December
Butyl benzyl phthalate	Effluent Gross Value	REPORT RQL = 20	UG/L	4 Hour Composite	January thru December
Chrysene	Effluent Gross Value	REPORT RQL = 20	UG/L	4 Hour Composite	January thru December
Diethyl phthalate	Effluent Gross Value	REPORT RQL = 10	UG/L	4 Hour Composite	January thru December
Dimethyl phthalate	Effluent Gross Value	REPORT RQL = 10	UG/L	4 Hour Composite	January thru December
1,2-Diphenyl-hydrazine	Effluent Gross Value	REPORT	UG/L	4 Hour Composite	January thru December
Fluoranthene	Effluent Gross Value	REPORT RQL = 10	UG/L	4 Hour Composite	January thru December
Fluorene	Effluent Gross Value	REPORT RQL = 10	UG/L	4 Hour Composite	January thru December
Hexachlorocyclopentadiene	Effluent Gross Value	REPORT RQL = 10	UG/L	4 Hour Composite	January thru December
Hexachloroethane	Effluent Gross Value	REPORT RQL = 10	UG/L	4 Hour Composite	January thru December
Indeno(1,2,3-cd)-pyrene	Effluent Gross Value	REPORT RQL = 20	UG/L	4 Hour Composite	January thru December

**Consolidated WCR - Annual Reporting Requirements:**

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

**Table III - G - 2: Consolidated WCR - Annual Limits and Monitoring Requirements****PHASE:** Final**PHASE Start Date:** 08/01/2013**PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Isophorone	Effluent Gross Value	REPORT RQL = 10	UG/L	4 Hour Composite	January thru December
N-nitrosodi-n-propylamine	Effluent Gross Value	REPORT RQL = 20	UG/L	4 Hour Composite	January thru December
N-nitrosodiphenyl-amine	Effluent Gross Value	REPORT RQL = 20	UG/L	4 Hour Composite	January thru December
N-nitrosodimethyl-amine	Effluent Gross Value	REPORT RQL = 20	UG/L	4 Hour Composite	January thru December
Nitrobenzene	Effluent Gross Value	REPORT RQL = 10	UG/L	4 Hour Composite	January thru December
Phenanthrene	Effluent Gross Value	REPORT RQL = 10	UG/L	4 Hour Composite	January thru December
Pyrene	Effluent Gross Value	REPORT RQL = 20	UG/L	4 Hour Composite	January thru December
Benzo(ghi)perylene	Effluent Gross Value	REPORT RQL = 20	UG/L	4 Hour Composite	January thru December
Benzo(a)anthracene	Effluent Gross Value	REPORT RQL = 10	UG/L	4 Hour Composite	January thru December
1,2-Dichlorobenzene	Effluent Gross Value	REPORT RQL = 9	UG/L	Grab	January thru December
1,2,4-Trichloro-benzene	Effluent Gross Value	REPORT RQL = 10	UG/L	4 Hour Composite	January thru December
Dibenzo(a,h)anthracene	Effluent Gross Value	REPORT RQL = 20	UG/L	4 Hour Composite	January thru December
1,3-Dichlorobenzene	Effluent Gross Value	REPORT RQL = 9	UG/L	Grab	January thru December
1,4-Dichlorobenzene	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
2-Chloronaphthalene	Effluent Gross Value	REPORT RQL = 9.5	UG/L	4 Hour Composite	January thru December

**Consolidated WCR - Annual Reporting Requirements:**

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

**Table III - G - 2: Consolidated WCR - Annual Limits and Monitoring Requirements****PHASE:** Final**PHASE Start Date:** 08/01/2013**PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Di-n-octyl Phthalate	Effluent Gross Value	REPORT	UG/L	4 Hour Composite	January thru December
2,4-Dinitrotoluene	Effluent Gross Value	REPORT RQL = 10	UG/L	4 Hour Composite	January thru December
2,6-Dinitrotoluene	Effluent Gross Value	REPORT RQL = 9.5	UG/L	4 Hour Composite	January thru December
3,3'-Dichloro-benzidine	Effluent Gross Value	REPORT RQL = 60	UG/L	4 Hour Composite	January thru December
4-Bromophenyl phenyl ether	Effluent Gross Value	REPORT RQL = 9.5	UG/L	4 Hour Composite	January thru December
Naphthalene	Effluent Gross Value	REPORT RQL = 8	UG/L	4 Hour Composite	January thru December
Bis(2-ethylhexyl) phthalate	Effluent Gross Value	REPORT RQL = 30	UG/L	4 Hour Composite	January thru December
Di-n-butyl phthalate	Effluent Gross Value	REPORT RQL = 20	UG/L	4 Hour Composite	January thru December
Benzidine	Effluent Gross Value	REPORT RQL = 50	UG/L	4 Hour Composite	January thru December
Malathion	Effluent Gross Value	REPORT	UG/L	4 Hour Composite	January thru December
Demeton	Effluent Gross Value	REPORT	UG/L	4 Hour Composite	January thru December
Hexachlorobenzene	Effluent Gross Value	REPORT RQL = 10	UG/L	4 Hour Composite	January thru December
Hexachlorobutadiene	Effluent Gross Value	REPORT RQL = 10	UG/L	4 Hour Composite	January thru December
Mirex	Effluent Gross Value	REPORT	UG/L	4 Hour Composite	January thru December
1,3-Dichloropropene	Effluent Gross Value	REPORT RQL = 7	UG/L	Grab	January thru December

**Consolidated WCR - Annual Reporting Requirements:**

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

**Table III - G - 2: Consolidated WCR - Annual Limits and Monitoring Requirements****PHASE:** Final**PHASE Start Date:** 08/01/2013**PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
1,2,4,5-Tetrachloro-benzene	Effluent Gross Value	REPORT	UG/L	4 Hour Composite	January thru December
N-nitrosodiethyl-amine	Effluent Gross Value	REPORT	UG/L	4 Hour Composite	January thru December
N-nitrosopyrrolidine	Effluent Gross Value	REPORT	UG/L	4 Hour Composite	January thru December
Carbon Tetrachloride	Effluent Gross Value	REPORT RQL = 6	UG/L	Grab	January thru December
1,2-Dichloroethane	Effluent Gross Value	REPORT RQL = 3	UG/L	Grab	January thru December
Bromoform	Effluent Gross Value	REPORT RQL = 8	UG/L	Grab	January thru December
Chloroform	Effluent Gross Value	REPORT RQL = 5	UG/L	Grab	January thru December
Toluene	Effluent Gross Value	REPORT RQL = 6	UG/L	Grab	January thru December
Benzene	Effluent Gross Value	REPORT RQL = 7	UG/L	Grab	January thru December
Acrolein	Effluent Gross Value	REPORT RQL = 50	UG/L	Grab	January thru December
Acrylonitrile	Effluent Gross Value	REPORT RQL = 50	UG/L	Grab	January thru December
Chlorobenzene	Effluent Gross Value	REPORT RQL = 6	UG/L	Grab	January thru December
Chlorodibromomethane	Effluent Gross Value	REPORT RQL = 6	UG/L	Grab	January thru December
Ethylbenzene	Effluent Gross Value	REPORT RQL = 6	UG/L	Grab	January thru December
Methyl Bromide	Effluent Gross Value	REPORT RQL = 9	UG/L	Grab	January thru December

**Consolidated WCR - Annual Reporting Requirements:**

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

**Table III - G - 2: Consolidated WCR - Annual Limits and Monitoring Requirements****PHASE:** Final**PHASE Start Date:** 08/01/2013**PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Methyl Chloride	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Methylene Chloride	Effluent Gross Value	REPORT RQL = 6	UG/L	Grab	January thru December
Tetrachloroethylene	Effluent Gross Value	REPORT RQL = 9	UG/L	Grab	January thru December
Trichlorofluoro-methane	Effluent Gross Value	REPORT RQL = 5	UG/L	Grab	January thru December
1,1-Dichloroethane	Effluent Gross Value	REPORT RQL = 23.5	UG/L	Grab	January thru December
1,1-Dichloroethylene	Effluent Gross Value	REPORT RQL = 6	UG/L	Grab	January thru December
1,1,1-Trichloro-ethane	Effluent Gross Value	REPORT RQL = 6	UG/L	Grab	January thru December
1,1,2-Trichloro-ethane	Effluent Gross Value	REPORT RQL = 6	UG/L	Grab	January thru December
1,1,2,2-Tetrachloro-ethane	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
1,2-Dichloropropane	Effluent Gross Value	REPORT RQL = 5	UG/L	Grab	January thru December
1,2-trans-Dichloro-ethylene	Effluent Gross Value	REPORT RQL = 4	UG/L	Grab	January thru December
2-Chloroethyl Vinyl Ether (Mixed)	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Bromodichloromethane	Effluent Gross Value	REPORT RQL = 5	UG/L	Grab	January thru December
Vinyl Chloride	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Trichloroethylene	Effluent Gross Value	REPORT RQL = 5	UG/L	Grab	January thru December

**Consolidated WCR - Annual Reporting Requirements:**

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

**Table III - G - 2: Consolidated WCR - Annual Limits and Monitoring Requirements****PHASE:** Final**PHASE Start Date:** 08/01/2013**PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Methoxychlor	Effluent Gross Value	REPORT	UG/L	4 Hour Composite	January thru December
N-Nitrosodi-n-butylamine	Effluent Gross Value	REPORT	UG/L	4 Hour Composite	January thru December
Chloroethane	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Parachloro-m-cresol	Effluent Gross Value	REPORT	UG/L	4 Hour Composite	January thru December
Parathion	Effluent Gross Value	REPORT	UG/L	4 Hour Composite	January thru December
Phenols	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
2,4,5-Trichloro-phenol	Effluent Gross Value	REPORT	UG/L	4 Hour Composite	January thru December
Delta BHC, Total (ug/l)	Effluent Gross Value	REPORT RQL = 0.02	UG/L	4 Hour Composite	January thru December
Endosulfan Sulfate	Effluent Gross Value	REPORT RQL = 0.08	UG/L	4 Hour Composite	January thru December
Beta Endosulfan	Effluent Gross Value	REPORT RQL = 0.04	UG/L	4 Hour Composite	January thru December
Alpha Endosulfan	Effluent Gross Value	REPORT RQL = 0.02	UG/L	4 Hour Composite	January thru December
Endrin Aldehyde	Effluent Gross Value	REPORT RQL = 0.1	UG/L	4 Hour Composite	January thru December
PCB-1016 (Arochlor 1016)	Effluent Gross Value	REPORT	UG/L	4 Hour Composite	January thru December
2,3,7,8-Tetrachloro-dibenzo-p-dioxin	Effluent Gross Value	REPORT	UG/L	4 Hour Composite	January thru December
4,4'-DDT(p,p'-DDT)	Effluent Gross Value	REPORT RQL = 0.06	UG/L	4 Hour Composite	January thru December

**Consolidated WCR - Annual Reporting Requirements:**

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

**Table III - G - 2: Consolidated WCR - Annual Limits and Monitoring Requirements**

PHASE: Final

PHASE Start Date: 08/01/2013

PHASE End Date:

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
4,4'-DDD(p,p'-DDD)	Effluent Gross Value	REPORT RQL = 0.04	UG/L	4 Hour Composite	January thru December
4,4'-DDE(p,p'-DDE)	Effluent Gross Value	REPORT RQL = 0.04	UG/L	4 Hour Composite	January thru December
Aldrin	Effluent Gross Value	REPORT RQL = 0.04	UG/L	4 Hour Composite	January thru December
Alpha BHC	Effluent Gross Value	REPORT RQL = 0.02	UG/L	4 Hour Composite	January thru December
Beta BHC	Effluent Gross Value	REPORT RQL = 0.04	UG/L	4 Hour Composite	January thru December
Gamma BHC (lindane),	Effluent Gross Value	REPORT RQL = 0.03	UG/L	4 Hour Composite	January thru December
Chlordane	Effluent Gross Value	REPORT RQL = 0.2	UG/L	4 Hour Composite	January thru December
Dieldrin	Effluent Gross Value	REPORT RQL = 0.03	UG/L	4 Hour Composite	January thru December
Endosulfans, Total (alpha and beta)	Effluent Gross Value	REPORT	UG/L	4 Hour Composite	January thru December
Endrin	Effluent Gross Value	REPORT RQL = 0.04	UG/L	4 Hour Composite	January thru December
Toxaphene	Effluent Gross Value	REPORT RQL = 1	UG/L	4 Hour Composite	January thru December
Heptachlor	Effluent Gross Value	REPORT RQL = 0.02	UG/L	4 Hour Composite	January thru December
Heptachlor Epoxide	Effluent Gross Value	REPORT RQL = 0.4	UG/L	4 Hour Composite	January thru December
PCB-1221 (Arochlor 1221)	Effluent Gross Value	REPORT	UG/L	4 Hour Composite	January thru December
PCB-1232 (Arochlor 1232)	Effluent Gross Value	REPORT	UG/L	4 Hour Composite	January thru December

**Consolidated WCR - Annual Reporting Requirements:**

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

**Table III - G - 2: Consolidated WCR - Annual Limits and Monitoring Requirements****PHASE:** Final**PHASE Start Date:** 08/01/2013**PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
PCB-1242 (Arochlor 1242)	Effluent Gross Value	REPORT	UG/L	4 Hour Composite	January thru December
PCB-1248 (Arochlor 1248)	Effluent Gross Value	REPORT	UG/L	4 Hour Composite	January thru December
PCB-1254 (Arochlor 1254)	Effluent Gross Value	REPORT	UG/L	4 Hour Composite	January thru December
PCB-1260 (Arochlor 1260)	Effluent Gross Value	REPORT	UG/L	4 Hour Composite	January thru December
Polychlorinated Biphenyls (PCBs)	Effluent Gross Value	REPORT	UG/L	4 Hour Composite	January thru December
Chlorpyrifos	Effluent Gross Value	REPORT	UG/L	4 Hour Composite	January thru December
2-Chlorophenol	Effluent Gross Value	REPORT RQL = 20	UG/L	4 Hour Composite	January thru December
2-Nitrophenol	Effluent Gross Value	REPORT RQL = 18	UG/L	4 Hour Composite	January thru December
2,4-Dichlorophenol	Effluent Gross Value	REPORT RQL = 10	UG/L	4 Hour Composite	January thru December
2,4-Dimethylphenol	Effluent Gross Value	REPORT RQL = 13.5	UG/L	4 Hour Composite	January thru December
2,4-Dinitrophenol	Effluent Gross Value	REPORT RQL = 40	UG/L	4 Hour Composite	January thru December
2,4,6-Trichloro- phenol	Effluent Gross Value	REPORT RQL = 20	UG/L	4 Hour Composite	January thru December
4-Chlorophenyl phenyl ether	Effluent Gross Value	REPORT RQL = 21	UG/L	4 Hour Composite	January thru December
4-Nitrophenol	Effluent Gross Value	REPORT RQL = 12	UG/L	4 Hour Composite	January thru December
4,6-Dinitro-o-cresol	Effluent Gross Value	REPORT RQL = 60	UG/L	4 Hour Composite	January thru December

**Consolidated WCR - Annual Reporting Requirements:**

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

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**Table III - G - 2: Consolidated WCR - Annual Limits and Monitoring Requirements****PHASE:** Final**PHASE Start Date:** 08/01/2013**PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Phenol Single Compound	Effluent Gross Value	REPORT RQL = 10	UG/L	4 Hour Composite	January thru December
Pentachlorophenol	Effluent Gross Value	REPORT RQL = 30	UG/L	4 Hour Composite	January thru December
Pentachlorobenzene	Effluent Gross Value	REPORT	UG/L	4 Hour Composite	January thru December
Guthion	Effluent Gross Value	REPORT	UG/L	4 Hour Composite	January thru December

**MONITORED LOCATION:**  
014A SW Outfall DSN 014A**RECEIVING LOCATION:**  
Great Egg Harbor Bay**DISCHARGE CATEGORY(IES):**  
B - Industrial Wastewater**Location Description**

Effluent samples for DSN 014A shall be taken at the sampling station for DSN 014A (located in the scrubber/wastewater treatment building) for all parameters with the exception of whole effluent toxicity (WET). Samples for WET shall be taken at the discharge canal for DSN 010A after DSN 014A discharges into it.

**Contributing Waste Types**

Process Water

**Surface Water DMR Reporting Requirements:**

Submit a Monthly DMR: Within twenty-five days after the end of every month beginning from the effective date of the permit (EDP)..

**Table III - H - 1: Surface Water DMR Limits and Monitoring Requirements****PHASE:** Final**PHASE Start Date:** 08/01/2013**PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Flow, In Conduit or Thru Treatment Plant	Effluent Gross Value	REPORT Monthly Average	REPORT Daily Maximum	MGD	*****	*****	*****	*****	Continuous	Metered
January thru December	QL	***	***		***	***	***			
BOD, 5-Day (20 oC)	Effluent Gross Value	REPORT Monthly Average	REPORT Daily Maximum	KG/DAY	*****	REPORT Monthly Average	REPORT Daily Maximum	MG/L	2/Month	4 Hour Composite
January thru December	QL	***	***		***	***	***			
pH	Effluent Gross Value	*****	*****	*****	6.0 Daily Minimum	*****	9.0 Daily Maximum	SU	1/Day	Grab
January thru December	QL	***	***		***	***	***			
Solids, Total Suspended	Effluent Gross Value	8.18 Monthly Average	27.25 Daily Maximum	KG/DAY	*****	30 Monthly Average	100 Daily Maximum	MG/L	2/Month	4 Hour Composite
January thru December	QL	***	***		***	***	***			

**Surface Water DMR Reporting Requirements:**

Submit a Monthly DMR: Within twenty-five days after the end of every month beginning from the effective date of the permit (EDP)..

**Table III - H - 1: Surface Water DMR Limits and Monitoring Requirements****PHASE:** Final**PHASE Start Date:** 08/01/2013**PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
LC50 Statre 96hr Acu Mysid Bahia	Effluent Gross Value	*****	*****	*****	REPORT Report Per Minimum	*****	*****	%EFFL	1/Year	Composite
January thru December	AL	***	***		50	***	***			
Temperature, oC	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	DEG.C	1/Day	Grab
January thru December	QL	***	***		***	***	***			
Petroleum Hydrocarbons	Effluent Gross Value	*****	*****	*****	*****	10 Monthly Average	15 Daily Maximum	MG/L	2/Month	Grab
January thru December	QL	***	***		***	***	***			
Carbon, Tot Organic (TOC)	Effluent Gross Value	REPORT Monthly Average	REPORT Daily Maximum	KG/DAY	*****	REPORT Monthly Average	REPORT Daily Maximum	MG/L	2/Month	4 Hour Composite
January thru December	QL	***	***		***	***	***			
Sulfide, Total (as S)	Effluent Gross Value	1.1 Monthly Average	2.1 Daily Maximum	KG/DAY	*****	3900 Monthly Average	7900 Daily Maximum	UG/L	1/Week	4 Hour Composite
January thru December	QL	***	***		***	***	***			
Sulfate, Total (as SO4)	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	UG/L	1/6 Months	4 Hour Composite
January thru December	QL	***	***		***	***	***			
Iron, Total Recoverable	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	MG/L	1/6 Months	4 Hour Composite
January thru December	QL	***	***		***	***	***			

**Surface Water DMR Reporting Requirements:**

Submit a Monthly DMR: Within twenty-five days after the end of every month beginning from the effective date of the permit (EDP)..

**Table III - H - 1: Surface Water DMR Limits and Monitoring Requirements****PHASE:** Final**PHASE Start Date:** 08/01/2013**PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Boron, Total (as B)	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	UG/L	1/6 Months	4 Hour Composite
	QL	***	***		***	***	***			
Arsenic, Total Recoverable (as As)	Effluent Gross Value	0.23 Monthly Average	0.45 Daily Maximum	KG/DAY	*****	830 Monthly Average	1700 Daily Maximum	UG/L	1/Week	4 Hour Composite
	RQL	***	***		***	8	8			
Selenium, Total Recoverable	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	UG/L	1/6 Months	4 Hour Composite
	RQL	***	***		***	10	10			
Zinc, Total Recoverable	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	UG/L	1/6 Months	4 Hour Composite
	RQL	***	***		***	30	30			
Copper, Total Recoverable	Effluent Gross Value	0.47 Monthly Average	0.95 Daily Maximum	KG/DAY	*****	1700 Monthly Average	3500 Daily Maximum	UG/L	1/Week	4 Hour Composite
	RQL	***	***		***	10	10			
Mercury Total Recoverable	Effluent Gross Value	0.013 Monthly Average	0.027 Daily Maximum	KG/DAY	*****	49 Monthly Average	98 Daily Maximum	UG/L	1/Week	4 Hour Composite
	RQL	***	***		***	1	1			

**Surface Water DMR Reporting Requirements:**

Submit a Monthly DMR: Within twenty-five days after the end of every month beginning from the effective date of the permit (EDP)..

**Table III - H - 1: Surface Water DMR Limits and Monitoring Requirements****PHASE:** Final**PHASE Start Date:** 08/01/2013**PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Bis(2-ethylhexyl) phthalate	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	UG/L	1/6 Months	4 Hour Composite
January thru December	RQL	***	***		***	30	30			

MONITORED LOCATION:

SI6A Belt Filter Press

DISCHARGE CATEGORY(IES):

B - Industrial Wastewater

**Location Description**

Annually, a representative sample of the belt filter pressed sludge generated from wastewater treatment shall be analyzed pursuant to the Sludge Quality Assurance Regulations (SQAR, N.J.A.C. 7:14C) each year sludge is removed for ultimate management.

**Contributing Waste Types**

Ind Residual-Other

**Residuals DMR Reporting Requirements:**

Submit an Annual DMR: due 60 calendar days after the end of each calendar year.

**Table III - I - 1: Residuals DMR Limits and Monitoring Requirements**

PHASE: Final

PHASE Start Date: 08/01/2013

PHASE End Date:

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Solids, Total	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	%TS	1/Year	Composite
January thru December	QL	***	***		***	***	***			
Nitrate Nitrogen, Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/Year	Composite
January thru December	QL	***	***		***	***	***			
Nitrogen, Kjeldahl Total, Dry Wt	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/Year	Composite
January thru December	QL	***	***		***	***	***			
Potassium Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/Year	Composite
January thru December	QL	***	***		***	***	***			

**Residuals DMR Reporting Requirements:**

Submit an Annual DMR: due 60 calendar days after the end of each calendar year.

**Table III - I - 1: Residuals DMR Limits and Monitoring Requirements****PHASE:**Final**PHASE Start Date:** 08/01/2013**PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Nitrogen, Ammonia Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/Year	Composite
January thru December	QL	***	***		***	***	***			
Calcium Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/Year	Composite
January thru December	QL	***	***		***	***	***			
Molybdenum Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/Year	Composite
January thru December	QL	***	***		***	***	***			
Phosphorus Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/Year	Composite
January thru December	QL	***	***		***	***	***			
Arsenic, Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/Year	Composite
January thru December	QL	***	***		***	***	***			
Selenium, Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/Year	Composite
January thru December	QL	***	***		***	***	***			
Copper, Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/Year	Composite
January thru December	QL	***	***		***	***	***			

**Residuals DMR Reporting Requirements:**

Submit an Annual DMR: due 60 calendar days after the end of each calendar year.

**Table III - I - 1: Residuals DMR Limits and Monitoring Requirements****PHASE:** Final**PHASE Start Date:** 08/01/2013**PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Beryllium Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/Year	Composite
January thru December	QL	***	***		***	***	***			
Cadmium, Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/Year	Composite
January thru December	QL	***	***		***	***	***			
Zinc, Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/Year	Composite
January thru December	QL	***	***		***	***	***			
Lead, Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/Year	Composite
January thru December	QL	***	***		***	***	***			
Nickel, Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/Year	Composite
January thru December	QL	***	***		***	***	***			
Mercury, Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/Year	Composite
January thru December	QL	***	***		***	***	***			
Chromium, Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/Year	Composite
January thru December	QL	***	***		***	***	***			

**Residuals DMR Reporting Requirements:**

Submit an Annual DMR: due 60 calendar days after the end of each calendar year.

**Table III - I - 1: Residuals DMR Limits and Monitoring Requirements****PHASE:**Final**PHASE Start Date:** 08/01/2013**PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Iron, Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/Year	Composite
January thru December	QL	***	***		***	***	***			

**Residuals WCR - Annual Reporting Requirements:**

Submit an Annual WCR: due 60 calendar days after the end of each calendar year.

**Table III - I - 3: Residuals WCR - Annual Limits and Monitoring Requirements****PHASE:**Final**PHASE Start Date:** 08/01/2013**PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Amt Sludge Rmvd, Wet Cubic Yards	Industrial Residuals	REPORT	WCY/YR	Calculated	January thru December
Amt Sludge Rmvd, Wet Metric Tons	Industrial Residuals	REPORT	WMT/YR	Calculated	January thru December
Amt Sludge Rmvd, Gallons	Industrial Residuals	REPORT	GAL/YEAR	Calculated	January thru December
Total Amount of Sludge Removed	Industrial Residuals	REPORT	DMT/YR	Calculated	January thru December

**Residuals WCR - Annual Reporting Requirements:**

Submit an Annual WCR: due 60 calendar days after the end of each calendar year.

**Table III - I - 3: Residuals WCR - Annual Limits and Monitoring Requirements**

**PHASE:**Final                      **PHASE Start Date:** 08/01/2013                      **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Solids, Total	Industrial Residuals	REPORT	%TS	Composite	January thru December

**Residuals Transfer Reporting Requirements:**

Submit an Annual RTR: due 60 calendar days after the end of each calendar year.

# **PART IV**

## **SPECIFIC REQUIREMENTS: NARRATIVE**

### **Notes and Definitions**

#### **1. Stormwater Notes**

- a. The following notes refer to the monitoring requirements contained in the tables located in Part III of the permit.
  - i. No visible sheen. The parameter Petroleum Hydrocarbons shall be analyzed in accordance with N.J.A.C. 7:14A-12.8 et seq.
  - ii. The term "Daily Min." means to report minimum value obtained (usually only applied to pH).
  - iii. The term "Average" means to report the average value of the results.
  - iv. The term "Daily Max." means to report the analytical result which yielded the highest concentration.
  - v. "NL" means not limited, but monitoring and reporting is required.
  - vi. Reporting of analytical results shall follow the procedures described in the Department's "Discharge Monitoring Report Instruction Manual" (latest revision).
  - vii. Grab samples shall be collected at the designated sampling points and shall be collected as soon as practicable within 30 minutes and no later than 45 minutes after the start of the stormwater discharge (ASWD). For sampling, follow guidelines in, "NJDEP Field Sampling Procedures Manual", latest edition.
  - viii. Grab -3 is a multi-grab sample that shall be collected at the sampling points as follows: the first grab sample shall be collected (in accordance with "NJDEP Field Sampling Procedures Manual", latest edition) within 30 minutes (or as soon thereafter as practicable) after stormwater discharge (ASWD); the second grab between 30 and 45 minutes ASWD (or as soon thereafter as practicable); and the third grab between 45 and 60 minutes ASWD (or as soon thereafter as practicable).
  - ix. pH values that are measured below lower pH limit are not in violation if they are not lower than the measured pH of the precipitation collected on site during the storm event. To qualify for this exception, pH of that precipitation must be reported on the monitoring report form as "Rain" pH.
  - x. A "discernible, confined and discrete conveyance" includes, but is not limited to, a pipe, ditch or channel. Examples of such conveyances include storm sewer pipes, drainage ditches, spillways, gullies, swales, gutters, curbs and streets.

#### **2. Stormwater Definitions**

- a. Unless otherwise stated in this permit, the definitions set forth at N.J.A.C. 7:14A-1.2 and Discharge Monitoring Report (DMR) Instruction Manual are incorporated into this permit.
  - i. "Annual monitoring" means monitoring conducted at a minimum frequency of once every calendar year, beginning with the Effective Date of the Permit unless there is a different period specified in the permit.

- ii. "Composite Sample" means a combination of individual (or continuously taken) samples (aliquots) of at least 100 milliliters, collected at periodic intervals over a specified time period. The composite can be either time proportional or flow proportional; either the time interval between each aliquot or the volume of each aliquot should be proportional to either the flow at the time of sampling or the total flow since the collection of the previous aliquot. Aliquots may be collected manually or automatically. For intermittent discharges less than 4 hours duration, aliquots shall be taken at intervals not to exceed 15 minutes. For intermittent discharges of 4 hours or more duration, aliquots shall be taken at intervals not to exceed 30 minutes.
- iii. "EDP" means Effective Date of the Permit.
- iv. "EDPM" means the Effective Date of the Permit Modification".
- v. "mg/L" means milligrams per liter.
- vi. "Outfall" shall mean (a) a point within the facility at which stormwater associated with the facility's industrial activity enters a surface water body from a discernible, confined and discrete conveyance; or (b) a point at which stormwater associated with the facility's industrial activity enters a surface water body from a discernible, confined and discrete conveyance for transport as stormwater to an offsite surface water body.
- vii. "Process wastewater" means any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product. Process wastewater includes, but is not limited to, "leachate" and cooling water other than " non-contact cooling water". (Please note that for the purposes of this NJPDES permit, the stormwater discharges regulated by this permit are not process wastewater)
- viii. "Monthly Monitoring" means monitoring conducted at a minimum frequency of once every month, beginning with the EDP unless there is a different period specified.
- ix. "Quarterly Monitoring "means monitoring conducted at a minimum frequency of once every three calendar months, beginning with the EDP unless there is a different period specified in the permit.
- x. "Semiannual Monitoring" means monitoring conducted at a minimum frequency of once every six calendar months, beginning with the EDP unless there is a different period specified in the permit.
- xi. "Weekly Monitoring" means monitoring conducted at a minimum of once every seven calendar day period, beginning with the EDP unless there is a different period specified.
- xii. "Separate Storm Sewer" means a conveyance or system of conveyances (including roads with drainage systems, streets, catch basins, gutters, ditches, man-made channels, or storm drains): 1. Designed or used for collecting or conveying stormwater; 2. Which is not part of a combined sewer system; and 3. Which is not part of a publicly owned treatment works (POTW)
- xiii. "Seven Day" or "Weekly Average Value" means the greatest sum of all daily discharges measured during any seven consecutive days, divided by the number of daily discharges measured during that period. Results may be expressed in loading (g/day or kg/d) and/or concentration (ug/L or mg/L). Only data collected within a single calendar month may be used in the calculation of a seven day or weekly average value for that month.

- xiv. "Source materials" means any materials or machinery located at the facility and directly or indirectly related to process or other industrial activities which could be a source of pollutants in a stormwater discharge associated with industrial activity that is subject to N.J.A.C. 7:14A-11.5. Source materials include, but are not limited to: raw materials; intermediate products; final products; waste materials; by-products; industrial machinery and fuels; and lubricants, solvents, and detergents that are related to process or other industrial activities. Material or machinery that are not exposed to stormwater or that are not located at the facility are not "source materials".
- xv. "Stormwater" means stormwater runoff, snow melt runoff, surface runoff and drainage
- xvi. "ug/L " means micrograms per liter.
- xvii. "Multiple Grab Composite" or " Multi-Grab" means a combination of individual samples (aliquots) collected at a specified frequency over a specified time period. Each aliquot must be collected in a glass vial with a septum cap and iced until delivered for analysis. An air space should remain in the vial. Each aliquot shall be analyzed individually. The recorded value will be the flow proportioned average of the individual analyses for the specific time period.
- xviii."Maximum Value" means the highest value measured during the monitoring period.
- xix. "Minimum Value" means the lowest value measured during the monitoring period.
- xx. "DMR" means a Discharge Monitoring Report form prepared by the Department.
- xxi. "WCR" means a Wastewater Characterization Report form prepared by the Department.

## Industrial Wastewater

### A. MONITORING REQUIREMENTS

#### 1. Standard Monitoring Requirements

- a. Each analysis required by this permit shall be performed by a New Jersey Certified Laboratory that is certified to perform that analysis.
- b. The Permittee shall perform all water/wastewater analyses in accordance with the analytical test procedures specified in 40 CFR 136 unless other test procedures have been approved by the Department in writing or as otherwise specified in the permit.
- c. The permittee shall utilize analytical methods that will ensure compliance with the Quantification Levels (QLs) listed in PART III. QLs include, but are not limited to, Recommended Quantification Levels (RQLs) and Method Detection Levels (MDLs). If the permittee and/or contract laboratory determines that the QLs achieved for any pollutant(s) generally will not be as sensitive as the QLs specified in PART III, the permittee must submit a justification of such to the Bureau of Surface Water Permitting. For limited parameters with no QL specified, the sample analysis shall use a detection level at least as sensitive as the effluent limit.
- d. All sampling shall be conducted in accordance with the Department's Field Sampling Procedures Manual, or an alternate method approved by the Department in writing.
- e. All monitoring shall be conducted as specified in Part III.
- f. All sample frequencies expressed in Part III are minimum requirements. Any additional samples taken consistent with the monitoring and reporting requirements contained herein shall be reported on the Monitoring Report Forms.
- g. Annual and semi-annual wastewater testing shall be conducted in a different quarter of each year so that tests are conducted in each of the four permit quarters of the permit cycle. Testing may be conducted during any month of the permit quarters.
- h. Monitoring for Wastewater Characterization Report parameters shall be conducted concurrently with the Whole Effluent Toxicity (WET) monitoring, when feasible.
- i. Any influent and effluent sampling for toxic pollutant analyses shall be collected concurrently.
- j. The permittee shall perform all residual analyses in accordance with the analytical test procedures specified in 40 CFR 503.8 and the Sludge Quality Assurance Regulations (N.J.A.C. 7:14C) unless other test procedures have been approved by the Department in writing or as otherwise specified in the permit.
- k. DSN 001A - Flow is calculated based on the position of the control valve. The valve should be installed, calibrated and maintained to ensure that the instrumentation maintains accurate and precise measurements. DSN 009A and 010A - Flow shall be calculated based on the operating mode of the pumps. DSN 013A and 014A - Flow shall be metered.
- l. The net amount of heat per unit time shall be calculated by multiplying heat capacity, discharge flow, and discharge-intake temperature difference. The heat limits for DSN 009A and 010A shall apply to the sum of the heat contributions from both outfalls.
- m. Chlorine Produced Oxidants samples shall be taken once during each two hour period of bromination.

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- n. Net limitations shall be calculated by using the following formula:  $[(\text{gross effluent concentration}) * (\text{gross effluent flow}) - (\text{intake concentration}) * (\text{intake flow})] / [\text{gross effluent flow}]$ .

Individual intake and effluent flow values for that day shall be utilized in the above calculation.

### B. RECORDKEEPING

#### 1. Standard Recordkeeping Requirements

- a. The permittee shall retain records of all monitoring information, including 1) all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation (if applicable), 2) copies of all reports required by this NJPDES permit, 3) all data used to complete the application for a NJPDES permit, and 4) monitoring information required by the permit related to the permittee's residual use and/or disposal practices, for a period of at least 5 years, or longer as required by N.J.A.C. 7:14A-20, from the date of the sample, measurement, report, application or record.
- b. Records of monitoring information shall include 1) the date, locations, and time of sampling or measurements, 2) the individual(s) who performed the sampling or measurements, 3) the date(s) the analyses were performed, 4) the individual(s) who performed the analyses, 5) the analytical techniques or methods used, and 6) the results of such analyses.

### C. REPORTING

#### 1. Standard Reporting Requirements

- a. The permittee shall submit all required monitoring results to the Department on the forms provided to them. The Monitoring Report Forms (MRFs) may be provided to the permittee in either a paper format or in an electronic file format. Unless otherwise noted, all requirements below pertain to both paper and electronic formats.
- b. Any MRFs in paper format shall be submitted to the following addresses:
- NJDEP  
Division of Water Quality  
Administrative Section  
Mail Code 401-02B P.O. Box 420  
Trenton, New Jersey 08625-0420.
  - (if requested by the Water Compliance and Enforcement Bureau)  
NJDEP: Southern Bureau of Water Compliance and Enforcement  
One Port Center  
2 Riverside Drive, Suite 201  
Camden, New Jersey 08103
- c. Any electronic data submission shall be in accordance with the guidelines and provisions outlined in the Department's Electronic Data Interchange (EDI) agreement with the permittee. Paper copies must be available for on-site inspection by DEP personnel or provided to the DEP upon written request.
- d. All monitoring report forms shall be certified by the highest ranking official having day-to-day managerial and operational responsibilities for the discharging facility.

- e. The highest ranking official may delegate responsibility to certify the monitoring report forms in his or her absence. Authorizations for other individuals to sign shall be made in accordance with N.J.A.C. 7:14A-4.9(b).
- f. Monitoring results shall be submitted in accordance with the current Discharge Monitoring Report Manual and any updates thereof.
- g. If monitoring for a parameter is not required in a monitoring period, the permittee must report "CODE=N" for that parameter.
- h. If there are no discharge events during an entire monitoring period, the permittee must notify the Department when submitting the monitoring results. This is accomplished by placing a check mark in the "No Discharge this monitoring period" box on the paper or electronic version of the monitoring report submittal form.

## **D. SUBMITTALS**

### **1. Standard Submittal Requirements**

- a. The permittee shall amend the Operation & Maintenance Manual whenever there is a change in the treatment works design, construction, operations or maintenance which substantially changes the treatment works operations and maintenance procedures.

## **E. FACILITY MANAGEMENT**

### **1. Discharge Requirements**

- a. The permittee shall discharge at the location(s) specified in PART III of this permit.
- b. The permittee shall not discharge foam or cause foaming of the receiving water that: 1) Forms objectionable deposits on the receiving water, 2) Forms floating masses producing a nuisance, or 3) Interferes with a designated use of the waterbody.
- c. The permittee's discharge shall not produce objectionable color or odor in the receiving stream.
- d. The discharge shall not exhibit a visible sheen.
- e. When quantification levels (QL) and effluent limits are both specified for a given parameter in Part III, and the QL is less stringent than the effluent limit, effluent compliance will be determined by comparing the reported value against the QL.
- f. The Permittee is authorized to use the following corrosion inhibitors, biocides, or other cooling water additives: Trisodium Phosphate, Hydrated Lime, Sulfuric Acid, Cleartreat, Di-Sodium Phosphate, Bromine and Spectrus OX1200. Use of additional additives requires Departmental approval. The permittee shall submit any request to add or modify additives that are not already approved at least 180 days prior to anticipated use.

### **2. Applicability of Discharge Limitations and Effective Dates**

- a. Surface Water Discharge Monitoring Report (DMR) Form Requirements
  - i. The final effluent limitations and monitoring conditions contained in PART III for all outfalls apply for the full term of this permit action, with the exception of outfall DSN 010A. The initial effluent limitations and monitoring conditions for DSN 010A begin on the effective date of the permit, and the final effluent limitations and monitoring conditions apply when BLE completes the repowering project.

b. Wastewater Characterization Report (WCR) Form Requirements

- i. The final effluent monitoring conditions contained in PART III for all outfalls apply for the full term of this permit action.

**3. Operation, Maintenance and Emergency conditions**

- a. The permittee shall operate and maintain treatment works and facilities which are installed or used by the permittee to achieve compliance with the terms and conditions of this permit as specified in the Operation & Maintenance Manual.
- b. The permittee shall develop emergency procedures to ensure effective operation of the treatment works under emergency conditions in accordance with NJAC 7:14A-6.12(d).

**4. Toxicity Testing Requirements - Acute Whole Effluent Toxicity (DSNs 001A, 013A and 014A)**

- a. The permittee shall conduct toxicity tests on its wastewater discharge in accordance with the provisions in this section. Such testing will determine if appropriately selected effluent concentrations adversely affect the test species.
- b. Acute toxicity tests shall be conducted using the test species and method identified in Part III of this permit.
- c. Part III of this permit contains an Action Level (AL) for acute Whole Effluent Toxicity. Toxicity Reduction and Implementation Requirements may be triggered based on exceedences of this Action Level. See Toxicity Reduction and Implementation Requirements section below for more details.
- d. Any test that does not meet the specifications of N.J.A.C. 7:18, laboratory certification regulations, must be repeated within 30 days of the completion of the initial test. The repeat test shall not replace subsequent testing required in Part III.
- e. The permittee shall resubmit an Acute Methodology Questionnaire within 60 days of any change in laboratory.
- f. Submit an acute whole effluent toxicity test report: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP). The permittee shall submit toxicity test results on appropriate forms.
- g. Test reports shall be submitted to:
- i. New Jersey Department of Environmental Protection  
Mail Code 401-02B  
Division of Water Quality  
Bureau of Surface Water Permitting  
401 East State Street  
P.O. Box 420  
Trenton, New Jersey 08625-0420.

**5. Toxicity Reduction Implementation Requirements (TRIR)**

- a. The permittee shall initiate a tiered toxicity investigation if two out of six consecutive WET tests demonstrate that the effluent does not comply or will not comply with the toxicity limit or action level specified in Part III of this permit.

- i. If the exceedence of the toxicity limit or action level is directly caused by a documented facility upset, or other unusual event which has been identified and appropriately remedied by the permittee, the toxicity test data collected during the event may be eliminated when determining the need for initiating a TRIR upon written Department approval.
- b. The permittee shall begin toxicity characterization within 30 days of the end of the monitoring period when the second toxicity test exceeds the toxicity limits or action levels in Part III. The monitoring frequency for toxicity testing shall be increased to monthly. Up to 12 additional tests may be required.
  - i. The permittee may return to the toxicity testing frequency specified in Part III if four consecutive toxicity tests conducted during the Toxicity Characterization do not exceed the toxicity limit or action level.
  - ii. If two out of any six consecutive, acceptable tests again exceed the toxicity limit or action level in Part III, the permittee shall repeat the Toxicity Reduction Implementation Requirements.
- c. The permittee shall initiate a preliminary toxicity identification (PTI) upon the third exceedence of the toxicity limit or action level specified in Part III during toxicity characterization.
  - i. The permittee may return to the monitoring frequency specified in PART III while conducting the PTI. If more frequent WET testing is performed during the PTI, the permittee shall submit all biomonitoring reports to the DEP and report the results for the most sensitive species on the DMR.
  - ii. As appropriate, the PTI shall include:
    - (1) treatment plant performance evaluation,
    - (2) pretreatment program information,
    - (3) evaluation of ammonia and chlorine produced oxidants levels and their effect on the toxicity of the discharge,
    - (4) evaluation of chemical use and processes at the facility, and
    - (5) an evaluation of incidental facility procedures such as floor washing, and chemical spill disposal which may contribute to effluent toxicity.
  - iii. If the permittee demonstrates that the cause of toxicity is the chlorine added for disinfection or the ammonia concentration in the effluent and the chlorine and/or ammonia concentrations are below the established water quality based effluent limitation for chlorine and/or ammonia, the permittee shall identify the procedures to be used in future toxicity tests to account for chlorine and/or ammonia toxicity in their preliminary toxicity identification report.
  - iv. The permittee shall submit a Preliminary Toxicity Identification Notification within 15 months of triggering TRIR. This notification shall include a determination that the permittee intends to demonstrate compliance OR plans to initiate a CTI.
- d. The permittee must demonstrate compliance with the WET limitation or action level in four consecutive WET tests to satisfy the requirements of the Toxicity Reduction Investigation Requirements. After successful completion, the permittee may return to the WET monitoring frequency specified in PART III.
- e. The permittee shall initiate a Comprehensive Toxicity Investigation (CTI) if the PTI does not identify the cause of toxicity and a demonstration of consistent compliance with the toxicity limit or action level in Part III can not be made.
  - i. The permittee shall develop a project study plan identifying the party or parties responsible for conducting the comprehensive evaluation, establish a schedule for completing the study, and a description of the technical approach to be utilized.

- ii. If the permittee determines that the PTI has failed to demonstrate consistent compliance with the toxicity limit or action level in Part III , a Comprehensive Toxicity Investigation Workplan must be prepared and submitted within 90 days.
  - iii. The permittee shall summarize the data collected and the actions taken in CTI Quarterly Reports. The reports shall be submitted within 30 calendar days after the end of each quarter.
  - iv. The permittee shall submit a Final CTI Report 90 calendar days after the last quarterly report. The final CTI report shall include the corrective actions identified to reduce toxicity and a schedule for implementing these corrective actions.
- f. Upon receipt of written approval from the Department of the corrective action schedule, the permittee shall implement those corrective actions consistent with that schedule.
- i. The permittee shall satisfy the requirements of the Toxicity Reduction Implementation Requirements and return to the original toxicity monitoring frequency after corrective actions are implemented and the permittee demonstrates consistent compliance with the toxicity limit or action level in Part III in four consecutive toxicity tests.
  - ii. If the implemented corrective measures do not result in consistent compliance with the toxicity limit or action level in Part III, the permittee shall submit a plan for resuming the CTI.
  - iii. Documents regarding Toxicity Investigations shall be sent to the following:  
New Jersey Department of Environmental Protection  
Division of Water Quality  
Bureau of Surface Water Permitting  
Mail Code 401-02B P.O. Box 420  
Trenton, New Jersey 08625-0420.

## **F. CONDITIONS FOR MODIFICATION**

### **1. Notification requirements**

- a. The permittee may request a minor modification for a reduction in monitoring frequency for a non-limited parameter when four consecutive test results of "not detected" have occurred using the specified QL.

### **2. Causes for modification**

- a. The Department may modify or revoke and reissue any permit to incorporate 1) any applicable effluent standard or any effluent limitation, including any effluent standards or effluent limitations to control the discharge of toxic pollutants or pollutant parameters such as acute or chronic whole effluent toxicity and chemical specific toxic parameters, 2) toxicity reduction requirements, or 3) the implementation of a TMDL or watershed management plan adopted in accordance with N.J.A.C. 7:15-7.
- b. The permittee may request a minor modification to eliminate the monitoring requirements associated with a discharge authorized by this permit when the discharge ceases due to changes at the facility.

## **G. Custom Requirement**

### **1. Specific Sampling Requirements**

- a. Chlorine Produced Oxidants (CPO).

- i. 001A, 009A and 010A - CPO may not be discharged from any operating unit for more than two hours in any one day, and not more than one unit in the plant may discharge chlorine at any one time, consistent with 40 CFR Part 423.
- b. Total Petroleum Hydrocarbons for DSNs 009A and 010A - Petroleum hydrocarbons limits of 10 mg/L as a monthly average and 15 mg/L as a daily maximum are applicable to these outfalls although routine monitoring and reporting is not required at this time.
- c. Chromium Monitoring at DSN 001A - Monitoring is only required if cooling tower additives that contain these chemicals are used during the month specified on the monitoring report form. If cooling tower additives containing these chemicals are not used during that month then the permittee shall report "Code = N".
- d. Effluent pH (for DSNs 001A, 009A and 010A) - If the pH at the intake is outside the range of 6 to 9 standard units, a discharge outside the range of 6.0 to 9.0 standard units shall be permitted provided that: a) if the intake value is greater than 9 s.u. then the discharge value may not exceed the intake value, and b) if the intake value is less than 6.0 s.u. then the discharge value may not be less than the intake value.
- e. DSN 008A - The discharge of screen washwater from DSN 008A shall not cause an exceedance of the New Jersey Surface Water Quality Standards, N.J.A.C. 7:9B-1.1 et seq.
- f. Continuous Temperature - When continuous temperature monitoring is in use, compliance with effluent limitations for temperature shall be based, except as otherwise provided by the provisions hereof, on an average of all corresponding temperature values (influent and effluent temperature values) available for the corresponding calendar day. Continuous temperature monitoring is required at all times when non-contact cooling water is being discharged from outfalls 009 and 010, but is not required during periods where a malfunction of continuous temperature monitoring equipment has occurred. As used herein, "malfunction" means an infrequent, unintentional and not reasonably preventable failure of continuous temperature monitoring equipment. "Malfunction" does not include a failure caused by improper or inadequate maintenance of continuous temperature monitoring equipment or careless or improper operational practices with respect to such equipment. Where such a malfunction has occurred, the permittee shall within 24 hours verbally communicate the following information to the Department via the DEP Hotline:
  - i. the cause of the malfunction or the steps the permittee will take to determine such cause;
  - ii. the anticipated duration of the malfunction; and
  - iii. the steps the permittee is taking to prevent reoccurrence of the malfunction.

## **2. Impingement Alternatives Analysis and Section 316(b) Determination**

- a. Since the Section 316(b) final regulations are not due out until June 2013, the Department is requiring the permittee to submit an Impingement Alternative Analysis to assess technologies to minimize impingement mortality at the plant's intake. The purpose of this study is for the permittee to evaluate and analyze a potential alternative for reducing impingement mortality with a focus on improved screens and fish return.
- b. The Impingement Alternatives Analysis shall address the following factors at the intake:.

- i. Replacement of the existing screens with Ristroph screens having a dual spraywash system (high-and-low-pressure). The screens shall have fish lifting buckets to hold the fish in water as they are lifted to the low-pressure spraywash removal system. The screen size shall be optimized to minimize impingement mortality and the wire mesh shall have a smooth face. These screens shall be operated continuously exclusive of periods of maintenance or operational requirements.
  - ii. Installation of a fish return system for the intake structure that is designed and constructed in consideration of the following factors: 1) using a fiberglass composite or a similar non-abrasive material that will be added to the full length of the interior surface of the trough of the fish return; 2) a trough with a rounded shape that will reduce abrasion and obstructions to fish; 3) designed to have sufficient capacity, flow volume and water level to facilitate safe return of impinged organisms to the Great Egg Harbor; and 4) designed so that the fish return conveyance terminus is submerged at all tidal stages on a year-round basis.
  - iii. Inclusion of scoping cost estimates for alternatives and a project implementation schedule.
- c. In consideration of the regulatory and technical information available at this time, the Department hereby determines that conduct of an Impingement Alternatives Analysis to assess the installation of modified Ristroph traveling screens as well as a fish return system at the Cooling Water Intake Structure constitutes best technology available based on best professional judgement in accordance with Section 316(b) of the Clean Water Act.
  - d. Upon receipt of the Impingement Alternatives Analysis, the Department will evaluate the findings in concert with the final EPA regulations and will reopen the permit to incorporate permit conditions pursuant to N.J.A.C. 7:14A-16.4.
  - e. The permittee shall submit the Impingement Alternative Analysis on or before EDP + 15 months to the following address:

New Jersey Department of Environmental Protection  
Mail Code 401-02B  
Division of Water Quality  
Bureau of Surface Water Permitting  
401 East State Street  
P.O. Box 420  
Trenton, NJ 08625-0420.

### **3. Submissions as part of any NJPDES Renewal Application - Section 316(a) Special Condition**

- a. If upon renewal, the permittee wants the Section 316(a) variance to be continued, the request for the variance along with a basis for its continuance must be submitted at the time of the application for the renewal permit in accordance with 40 CFR 125.73(c). The Department's Section 316(a) Determination shall include, but not be limited to:
  - i. a review of whether the nature of the thermal discharge or the aquatic population associated with the Station have changed;.
  - ii. whether the existing permit conditions have assured the protection and propagation of a balanced indigenous population;.
  - iii. whether the best scientific methods to assess the effect of the permittee's cooling system have changed; and.
  - iv. whether the technical knowledge of stresses caused by the cooling system has changed.

#### **4. Thermal Modeling Study**

- a. Repowering the Station will result in changes to the thermal plume. After the Station completes repowering on May 1, 2016, the permittee shall complete a thermal plume characterization study utilizing the Cornell Mixing Zone Expert System (CORMIX) software and other appropriate far-field modeling as necessary. The study shall be submitted to the Department by April 30, 2017.

## Stormwater

### A. Permit Overview

#### 1. Summary of Stormwater Permit Requirements

- a. The permittee shall develop, implement, update and maintain a Stormwater Pollution Prevention Plan (SPPP), which includes a Drainage Control Plan (DCP) (see Part IV.B).
- b. The permittee shall develop, implement, update and maintain site specific best management practices (BMPs) to achieve the design criteria and effluent limitations as specified in the permit (see Part IV.C).
- c. The permittee shall be responsible for supervising and managing the operation and maintenance of the facility, which includes routine inspections of the facility (see Part IV.D).
- d. The permittee shall conduct stormwater monitoring in accordance with the permit (see Part IV.E).
- e. The permittee shall summarize facility inspections in written reports and submit reports and certifications to ensure compliance with this permit (see Part IV.F).
- f. The permittee shall retain records of all monitoring information, maintenance records, and copies of all reports (including the SPPP and soil erosion and sediment control plans) required by this permit (see Part IV.G).

### B. Stormwater Pollution Prevention Plan

#### 1. SPPP Minimum Requirements

- a. The SPPP shall address all stormwater discharges associated with industrial activity, including source materials, at the facility.
- b. The facility shall gain drainage control of the stormwater runoff from all areas of industrial activity, including source materials, in accordance with section B.4 below.
- c. The permittee shall include a DCP as a section within the SPPP.
- d. The SPPP shall identify the BMPs that are in place to eliminate, reduce, or minimize exposure of industrial activity and source materials to stormwater discharging to surface or ground water.
- e. The SPPP shall demonstrate that upon implementation the stormwater discharges associated with industrial activity meet the permit conditions contained in this permit.
- f. The SPPP shall address, but is not limited to, the following outside areas:
  - i. outside vehicle/equipment fueling, maintenance and washing areas, and fuel storage (e.g., diesel fuel);
  - ii. outside areas used for waste management/handling or storage of equipment (e.g., dumpsters, scrap metal, vehicle parts, drums, and garbage);
  - iii. pavement and access roads needing repairs and unpaved surfaces with the potential to erode and discharge solids (soils and/or sediments) to surface waters;
  - iv. catch basins, trench drains and roof drains discharging to surface waters;
  - v. loading docks;
  - vi. spills/leaks/non-stormwater discharges of fluid products, raw material, vehicle coolants, lubricants and other chemicals;

## Stormwater

- vii. above ground storage tanks; and
- viii. other areas/activities with stormwater discharges to surface water associated with industrial activity as defined by the federal rules (40 CFR 122.26 (b) (14)) and contained by reference in the state rules.
- g. The SPPP shall identify BMPs to stabilize surface soils and reduce sediment transport, using BMPs outlined in the Standards for Soil Erosion and Sediment Control in New Jersey where appropriate, in accordance with the Soil Erosion and Sediment Control Act N.J.S.A. 4:24-39 et seq.
- h. The SPPP shall identify production and non-production areas that have a high potential for soil erosion or a known soil erosion problem. Appropriate vegetative, structural, or stabilization measures shall be selected to limit erosion and sediment transport in these areas.
- i. The SPPP shall be prepared, implemented, and maintained in accordance with good engineering practices and shall include, at a minimum, all of the items and information identified in Part IV. B, C and Attachment 1: "Contents of the Stormwater Pollution Prevention Plan".
- j. The original SPPP shall be retained at the facility for use by the facility and inspection by the Department.

### 2. BMP Design Criteria

- a. For monitoring only requirements, BMPs shall be designed, implemented and maintained to achieve the following design criteria upon implementation of the SPPP:
  - i. COD  $\leq$  120 mg/L
  - ii. TSS  $\leq$  100 mg/L
  - iii. pH = 6.0 - 9.0 S.U.
  - iv. Oil and Grease  $\leq$  15 mg/L
- b. If the monitoring results exceed the design criteria (or are outside the range for pH, if applicable), the permittee shall:
  - i. evaluate potential sources for the specific parameter that did not comply with the design criteria;
  - ii. identify BMPs (e.g., source control, operational control, stormwater treatment) by which the permittee can further reduce stormwater contamination;
  - iii. evaluate whether any improvements or changes to the SPPP are warranted to reduce and control this parameter concentration;
  - iv. update the SPPP with any improvements or changes; and
  - v. summarize the results in the annual report in accordance with Part IV.F, including remedial actions taken.
- c. If the permittee fails to design, implement and maintain the BMPs identified in the SPPP to meet the design criteria, or to make significant progress toward meeting the design criteria, the Department may modify the permit in accordance with N.J.A.C. 7:14A-16.4(b)11.

### 3. Drainage Control

- a. Drainage Control shall be established in all areas of industrial activity. In areas of industrial activity that cannot be diverted to a permitted outfall, the permittee shall do one of the following:

- i. convert the area(s) to "no discharge" area(s) and manage stormwater collected in the area(s) as industrial wastewater; or
  - ii. eliminate industrial activity in these areas.
- b. To establish drainage control, a facility shall:
  - i. ensure all "stormwater associated with industrial activity" as defined in N.J.A.C. 7:14A-1.2, is discharged through a regulated outfall(s) to surface water and/or a ground water discharge location;
  - ii. create a representative monitoring point for each regulated outfall(s) to surface water and/or a ground water discharge location; and
  - iii. separate the discharge of stormwater not associated with industrial activity (e.g. rooftop runoff, employee parking, open space) from regulated discharges, where practicable.
- c. Outfall Stabilization
  - i. The permittee shall design, implement and maintain BMPs to prevent downstream erosion and sedimentation caused by stormwater, and/or process wastewater runoff at the outfall(s).
  - ii. At a minimum, the BMPs shall meet the most recent technical standards listed in Standards for Soil Erosion and Sediment Control in New Jersey, Engineering Standards Section titled Standard for Off-Site Stability.
  - iii. Where erosion at the outfall structure occurs the permittee shall restore the eroded areas to its previous condition.

#### **4. Drainage Control Plan**

- a. The facility shall develop, implement and/or maintain a DCP containing the following:
  - i. a written narrative; and
  - ii. a Drainage Control Map.
- b. The DCP shall be certified by a New Jersey licensed Professional Engineer.
- c. Elevations for the Drainage Control Map shall be measured by a New Jersey licensed surveyor.
- d. The written narrative shall describe how the facility will establish drainage control and shall include the following:
  - i. facility name;
  - ii. NJPDES permit number (NJ0005444) and Program Interest I.D. number;.
  - iii. an alpha-numeric discharge serial number (e.g., DSN001A, DSN002A, DSN003A) for each surface water monitoring point(s);
  - iv. an alpha-numeric identifier (e.g. I01I, I02I, I03I) for each ground water monitoring point(s);
  - v. the latitude and longitude for each monitoring point(s);
  - vi. the name of all receiving water bodies (for discharges to surface water) and assigned New Jersey Surface Water Quality Standards' classifications;

- vii. the name of the receiving aquifer (for discharges to ground water) and assigned New Jersey Ground Water Quality Standards' classification; and
  - viii. a description of any proposed stormwater treatment.
- e. Unless otherwise specified by the Department the Drainage Control Map shall be an appropriate engineering scale, which is legible and clearly depicts the following information when applicable:
- i. site boundary;
  - ii. title block containing tax block and lot number;
  - iii. north directional arrow;
  - iv. date prepared and subsequent revisions;
  - v. final grading of drainage areas, including elevations and flow arrows showing the drainage to regulated outfalls;
  - vi. location of flow diversion structures, treatment units (i.e. lined and unlined basins);
  - vii. location of surface water outfalls (regulated and unregulated) and discharge structures;
  - viii. location of ground water discharge point(s) and discharge structure;
  - ix. receiving waters and their location;
  - x. areas of industrial activity (i.e. Maintenance, fueling, equipment cleaning and storage);
  - xi. access roads;
  - xii. existing buildings and other structures; and
  - xiii. employee and customer parking.

#### **5. Modification of SPPP to include the DCP**

- a. An existing facility with a SPPP shall modify the plan to include the Drainage Control requirements outlined in Part IV.B.
- b. The modified SPPP that includes the DCP shall be implemented in accordance with the permit and certified on a form provided by the Department.
- c. The deadline for the preparation and implementation of the SPPP to include the DCP and submittals are contained in Part IV.F of the permit.

#### **6. Continuation of SPPP**

- a. The SPPP shall be updated and maintained in accordance with the permit and recertified on a form provided by the Department in accordance with the schedule in Part IV.F.

### **C. Site Specific Best Management Practices**

#### **1. Coal Pile Area**

- a. Implement and maintain measures that prevent dust emissions from coal handling areas (including storage area).

- b. The dike surrounding the coal pile must be tall enough to control the spill of coal particles.
- c. Coal particles outside the diked areas shall be minimized to the best extent practicable. These particles shall be removed from these areas upon discovery.
- d. The discharge of coal particles to the Great Egg Harbor Bay shall be minimized to the furthest extent practicable.

## **2. Delivery Vehicles**

- a. Implement and maintain measures that prevent or minimize the contamination of stormwater runoff from delivery vehicles arriving at the plant site.
- b. The permittee shall have procedures to inspect delivery vehicles to ensure the overall integrity of the body and container.
- c. The permittee shall have procedures to deal with leakage/ spillage from delivery vehicles or containers.

## **3. Ash Loading and Unloading Areas**

- a. Implement and maintain measures to reduce and control the tracking of ash/ residue from the ash loading areas.
  - i. Clear the ash building floor and adjacent roadways of spillage, debris and excess water before departure of each loaded vehicle.
- b. Develop and maintain procedures to reduce ash residue that may be tracked onto access roads traveled by residue handling vehicles, and reduce ash residue on exit roads leading into and out of residue handling areas.

## **4. Fueling and Spill Prevention Planning**

- a. Implement and maintain measures to ensure the potential of spills or leakage of any liquid are minimized or eliminated.
- b. Any spills shall be cleaned up properly immediately after discovery.

## **5. Outdoor Maintenance, Fabrication, and Assembly**

- a. Implement and maintain inspection protocols following any maintenance, fabrication, and assembly procedures occurring outdoors.
- b. Any waste oils, dust, sandblast residue, steel shavings, etc. shall be cleaned up and properly disposed of in accordance with all applicable State, Federal, and local requirements.

## **6. Scrap Metal**

- a. Scrap metal exposed to stormwater must be free of residual materials (i.e., oils, tar, fine particles) and deterioration due to oxidation.
- b. The permittee shall have in place a program for the periodic removal of scrap metal material.
- c. Scrap metal that is not free of residual materials or is deteriorating must be removed or stored in a watertight container and covered.

## **7. BMP - Vehicle/ Equipment Washing**

- a. The discharge of wash waters to surface water are strictly prohibited. Designate and clearly mark equipment-cleaning areas.
- b. Cleaning of aircraft, ground vehicles and equipment shall be carried out indoors and drain to sanitary sewer when ever practicable.
- c. Outdoor cleaning management practices shall be conducted in such a manner as to prevent the discharge of wash water to surface water.
- d. This should include the following management practices, or equivalent measures:
  - i. Section off portions of stormwater sewer system for the equipment cleaning drainage area. Pump the wash water from the sectioned off stormwater sewer system for recycling, discharge to sanitary sewer, or proper disposal by a licensed waste hauler.
  - ii. Construct a pad and dike. Pump wash water to be recycled, discharged to sanitary sewer, or properly disposed of by a waste hauler. Maintain and clean dike area of residuals.
  - iii. Place impermeable tarps in a diked area. Vacuum or pump wash water and remove tarp after use.

#### **8. BMP - Vehicle/ Equipment Maintenance**

- a. Designate and clearly mark areas for equipment maintenance.
- b. Establish standard operating procedures that prevent or minimize the contamination of stormwater runoff from all areas used for aircraft, ground vehicle, and equipment maintenance.
- c. This shall include, but is not limited to, the following management practices, or equivalent measures:
  - i. Performing maintenance indoors when practicable.
  - ii. Maintaining and organizing inventory of materials used in maintenance areas.
  - iii. Draining all parts containing fluids prior to maintenance and/or disposal.
  - iv. Prevent the practice of hosing down the apron or hanger floor. The use of dry cleanup methods, and/or collecting the stormwater runoff from the maintenance area and providing treatment or recycling should be considered.

#### **9. BMP - Discharge of Stormwater from Secondary Containment (version #1)**

- a. The following BMP shall be implemented for discharging stormwater from secondary containment areas at the facility. The facility is only authorized to discharge stormwater.
  - i. The stormwater in the containment area shall not come into contact with the contents of the wastewater storage tank(s).
  - ii. The discharge pipe/outfall from the containment area shall have a valve and that valve shall remain closed at all times except when discharging stormwater.
  - iii. A visual inspection of the tank shall be performed to insure the tank's physical integrity; which must be completed on a routine basis and an inspection log maintained.
  - iv. Regular maintenance of the wastewater tank must be performed (e.g. painting, repair) to insure the tank's integrity.

- v. A visual inspection of the stormwater is to be performed prior to the onset of a discharge to insure that the stormwater has not been contaminated by the contents of the tank or by other materials.
- vi. Alternative means for disposing the stormwater must be established for stormwater that has or is suspected to have been contaminated by the contents of the tank or by other materials.

#### **10. BMP - Bulk Transfer Of Liquids**

- a. In areas where liquid materials are transferred in bulk from truck or rail cars, the permittee shall take appropriate measures to minimize contact of transferred material with precipitation.
  - i. Hose connection points at storage containers shall be inside containment areas.
  - ii. Drip pans must be used in areas that are not in a containment area where spillage may occur (e.g. hose reels, connection points with rail cars or trucks).
  - iii. All loading and unloading racks must be surrounded by curbs to contain accidental spills. Install a canopy over a loading rack.
  - iv. In order to prevent discharge of spills or leaks where precipitation is contained, contained areas should be restrained by valves or other equivalent means.

#### **11. Salvaged Equipment and Spare Parts**

- a. Dismanteled equipment that is being used for is salvageable parts and is exposed to stormwater shall be free of residual materials (i.e., oils, lubricants, tar, fine particles) and deterioration due to oxidation.
- b. Salvageable equipment that is not free of residual materials or is deteriorating must be removed or stored in a water tight container and covered.

### **D. Operations and Maintenance**

#### **1. Facility and BMP Operation and Maintenance**

- a. The permittee shall be responsible for supervising and managing the operation and maintenance of this facility. This requires implementing BMPs that must be installed or used by the permittee to achieve compliance with the SPPP. Proper operation and maintenance also requires the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit.
- b. The operation and maintenance activities shall be verified through the certification and annual reporting requirements of Part IV.F.
- c. Frequent and thorough inspections, at a frequency of at least quarterly, are necessary to ensure adequate functioning of control measures. Inspections are recommended to be conducted during dry periods as well as storm events.
  - i. Inspections during dry periods allow facilities to identify and address any problems prior to a storm event, thereby minimizing the chance for stormwater contamination.
  - ii. Inspections during significant storm events ensure that measures are functioning as originally intended and provide an opportunity for facilities to observe what materials and/or activities are exposed to stormwater.

#### **2. Soil Erosion Sediment Control Plan**

- a. For construction activities disturbing one (1) acre or more of total land area, authorization shall be obtained under either a modification to this permit or under NJPDES Permit No. NJ0088323 (Construction Activity Stormwater General Permit), for stormwater from such construction activities that would be discharged to surface waters.
- b. Land disturbances that may result in a stormwater discharge authorized by this permit, shall be executed only in accordance with a soil erosion and sediment control plan certified pursuant to N.J.S.A. 4:24-43, or requirements for soil erosion and sediment control established in or pursuant to a municipal ordinance in accordance with N.J.S.A. 4:24-48, whichever is applicable.
- c. A copy of this plan shall be retained by the permittee for a period of at least five (5) years after the completion of construction.

## **E. Monitoring**

### **1. Criteria for monitoring a valid storm event**

- a. The criteria for a valid storm event is any precipitation that produces a stormwater discharge including discharges from snow melt events.
  - i. The permittee shall monitor its stormwater discharge during a valid storm event from the outfalls designated in the DCP.
  - ii. For stormwater that accumulates during a storm event in a containment area impoundment or other device that controls the discharge, the facility shall monitor its stormwater at the time of the discharge.
  - iii. A wet basin must be monitored whenever there is a discharge.
- b. Sampling a Snowmelt Event
  - i. If the snowmelt results in a discharge, the permittee may collect a sample of the snow melt as part of the site monitoring requirements.
  - ii. Snowmelt samples must be representative of the area of industrial activity. Samples may not be collected from snow stockpiles from non-industrial areas of the facility.
  - iii. The permittee shall only sample one snow melt event per calendar year.

### **2. Monitoring Locations**

- a. Samples shall be taken in compliance with the specified monitoring locations in Part III.
- b. Monitoring locations shall not be changed without notification to and the approval from the Department.
- c. Monitoring locations shall be included on the DCP map as detailed in Part IV.B.

### **3. Monitoring Schedule**

- a. Samples shall be collected in accordance with the sampling frequency established by the Department in Part III.

### **4. Collection and Analysis of Samples**

- a. Stormwater samples shall be collected within 30 minutes of the stormwater discharge or as soon thereafter as practicable.

- b. The facility can collect their own sample.
- c. Samples shall be analyzed by a New Jersey certified laboratory (N.J.A.C 7:18).
- d. All samples shall be analyzed in accordance with approved U.S. Environmental Protection Agency (EPA) methods contained in 40 CFR Part 136, unless otherwise specified in the footnotes in Part IV.A.
- e. The permittee may take samples and have analysis made by a New Jersey Certified laboratory on additional occasions to those specified in this permit. If so, the maximum values of all analytical results taken during the sampling period shall be reported. In addition, if an average value is required to be reported, all sample results shall be used when calculating the average. However, for pH, both minimum and maximum values are reported.
- f. If only one analysis for a given parameter is made during any monitoring period specified in this permit, the result of such analysis shall be construed as the maximum value for that parameter, for said monitoring period.

## **F. Inspections, Reports and Submissions**

### **1. Stormwater Monitoring Report Forms (MRFs)**

- a. Sampling results shall be summarized and reported in accordance with the requirements contained in Part III of this permit on the appropriate monitoring report forms mailed separately by the Bureau of Permit Management.
- b. If the permittee finds that the pre-printed MRFs they receive from the Department contain errors from the monitoring and reporting requirements contained in Part III, the permittee should contact the Bureau of Nonpoint Pollution Control at (609) 633-7021.
- c. The permittee is required to monitor its stormwater discharge and submit appropriate MRFs to the Department in accordance with conditions of permit even if pre-printed MRFs contain errors.
- d. The permittee shall make hand corrections to the MRFs if corrected forms are not received prior to the monitoring report due date.

### **2. Reporting Storm Event Information**

- a. In order for the Department to better assess the monitoring results provided by the permittee, the Department requires that storm event information is recorded and reported along with monitoring results.
- b. The permittee shall record and submit the following storm event information on the appropriate MRFs provided by the Department:
  - i. date of storm event;
  - ii. time storm event began;
  - iii. storm event duration;
  - iv. time of sample collection;
  - v. rainfall amount at time of sampling (an estimate of the inches of rainfall or snowfall, which can be based upon such data as recorded by a local weather monitoring station(s) or an onsite maintained monitoring station);

- vi. date of sample collection;
- vii. type of storm event (rain or snowmelt); and
- viii. pH of rain (optional).

### **3. Reporting "No Discharge"**

- a. If a discharge does not occur during a particular reporting period, the permittee should check "No Discharge this monitoring period" on the MRF transmittal sheet for each discharge monitoring location which had "no discharge"
- b. The Department shall compare all reports of "No Discharge" against information provided by Premium AccuWeather services ([https://www1.accuweather.com/premium\\_login.php](https://www1.accuweather.com/premium_login.php)) to determine if a discharge has occurred.

### **4. MRF Submittals**

- a. Unless otherwise specified or directed, signed copies of required MRFs shall be submitted postmarked no later than the 25th day of the calendar month following the completed monitoring period to the address given below:
  - i. New Jersey Department of Environmental Protection  
Mail Code 401-02B  
Office of Permit Management  
P.O. Box 420 - 401 E. State St.  
Trenton, New Jersey 08625-0420  
Attn. Monitoring Reports
- b. Submitting MRFs
  - i. The permittee shall continue to submit MRFs in accordance with the schedule established in the previous permit cycle.
- c. The permittee may also participate in electronic reporting of the MRFs via NJ Online with the Electronic Discharge Interchange (EDI) system. Follow the directions in the NJPDES Monitoring Report Form Manual to participate.

### **5. SPPP Modification Submittal Requirements**

- a. A SPPP shall be modified to include a DCP in accordance with the submittal schedule below:
  - i. Copies of the SPPP including the DCP shall be submitted to the Department's Southern Bureau of Water Compliance and Enforcement and the Bureau of Nonpoint Pollution Control.
  - ii. Submit the SPPP: within 18 months from the effective date of the permit (EDP).
  - iii. The implementation of the modified SPPP to include the DCP shall be certified through the annual recertification in accordance with Part IV.F below.
  - iv. This certification form is available on the Department website at <http://www.state.nj.us/dep/dwq/forms.htm#stormforms>

### **6. Annual Inspections, Reports, and Recertifications**

- a. The permittee shall conduct annual inspections of the facility in accordance with N.J.A.C. 7:14A-24.9(a) to assess all areas contributing to the stormwater discharge authorized by this permit, to evaluate whether the SPPP complies with and is implemented in accordance with this permit, and whether additional measures are needed to meet the conditions of this permit.
- b. The permittee shall prepare an annual report.
- c. The annual report shall be completed prior to the annual recertification submission date.
- d. The annual report shall be retained by the permittee in accordance with Part IV.G for a period of at least five (5) years.
- e. Submit an Annual Report: by September 1 of each year beginning from the effective date of the permit (EDP).
- f. The annual report shall be submitted with the annual recertification. This certification form is available on the Department website at <http://www.state.nj.us/dep/dwq/forms.htm#stormforms>.
- g. The annual report shall summarize the findings of the annual inspection in accordance with a. above, including:
  - i. The date of the inspection; and
  - ii. Name(s) and title of the inspector(s).
- h. The annual report shall include a summary comparing the MRF data with the design criteria. This summary shall include:
  - i. An explanation of two (2) or more exceedances of the design criteria for the same parameter;
  - ii. Changes and/or upgrades to BMPs to meet design criteria, and
  - iii. A discussion of the effectiveness of the BMP changes and/or upgrades.
- i. The permittee shall annually certify on a form provided by the Department that the facility has completed their annual report as specified above and is in compliance with the SPPP and this permit.
  - i. Submit the Generic Certification Form certifying that the annual inspection was conducted: by September 1 of each year beginning from the effective date of the permit (EDP).
  - ii. Any incident of non-compliance shall be identified in the certification. This shall include the steps being taken to remedy the non-compliance, and to prevent such incidents from recurring.

## **G. Record Keeping**

### **1. Record Keeping Requirements**

- a. The permittee shall retain records of all monitoring information, maintenance records, and copies of all reports required by this permit for a period of at least five (5) years.

### **2. SPPP Record Keeping Requirements**

- a. The SPPP shall be signed by the permittee, and the original shall be retained at the facility for use by the facility and inspection by the Department.
- b. The SPPP shall be made available, upon request, to a representative of the Department and to the owner and operator of any municipal separate storm sewer receiving the stormwater discharge.

- c. The SPPP shall be made available to the public upon request, except as noted below.
- d. The facility may claim any portion of the SPPP as confidential in accordance with the provisions set forth in N.J.A.C. 7:14A-18.2.

**3. Soil Erosion and Sediment Control Plan Record Keeping**

- a. If the permittee is required to implement a Soil Erosion and Sediment Control Plan as a result of construction activities or land disturbance greater than or equal to one (1) acre, a copy of the plan shall be retained by the permittee for a period of at least five (5) years after the completion of construction.

B L ENGLAND GENERATING STATION, Beesleys Point

Permit No.NJ0005444  
PER050003 Consolidated Renewal Permit Action

**ATTACHMENT 1:  
CONTENTS OF THE  
STORMWATER  
POLLUTION PREVENTION PLAN**

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## **I. Stormwater Pollution Prevention Plan**

The following outline provides the key elements of an acceptable Stormwater Pollution Prevention Plan (SPPP). The purpose of the SPPP is to meet the following objectives:

- A. identify potential sources of pollution and source materials onsite which may reasonably be expected to affect the quality of stormwater discharges associated with industrial activity;
- B. establish drainage control;
- C. describe and ensure that practices are implemented to eliminate and/or reduce pollutants from source materials in stormwater discharges associated with industrial activity to meet design criteria and effluent limitations; and
- D. ensure continued compliance with the terms and conditions of this permit.

## **II. Stormwater Pollution Prevention Team**

The permittee shall form and identify a Stormwater Pollution Prevention Team in the SPPP. The team is responsible for developing, implementing and maintaining the SPPP in accordance with good engineering practices. The SPPP shall identify names of those individuals and their titles within the facility's organization who are members of the team. The SPPP shall clearly identify the team leader who has the authority to make decisions and give directives to effectively implement the plan. The plan shall clearly identify the responsibilities of each team member. The activities and responsibilities of the team shall address all aspects of the facility's SPPP which are provided below.

## **III. Description of Existing Environmental Management Plans**

The SPPP team shall evaluate the facility's existing environmental management plans and programs for consistency with this permit and determine which provisions, if any, from these other plans can be incorporated by reference into the SPPP.

Examples of plans which may be referred to when applicable to the site include: Discharge Prevention Containment and Countermeasure (DPCC), Discharge Cleanup and Removal (DCR), Preparedness Prevention and Contingency Plan (PPCP, 40 CFR Parts 264 and 265), the Spill Prevention Control and Countermeasures (SPCC) requirements (40 CFR Part 112), the National Pollutant Discharge Elimination System Toxic Organic Management Plan (NPDESTOMP, 40 CFR Parts 413, 433, and 469), and the Occupational Safety and Health Administration (OSHA) Emergency Action Plan (29 CFR Part 1910). A copy of any plans referred to in the SPPP should be kept on-site with the SPPP.

## **IV. Site Assessment**

The Site Assessment shall describe the physical facility and the potential pollutant sources (materials, activities and areas) which may be reasonably expected to affect the quality of stormwater discharges. The key elements of the site assessment shall include, at a minimum, the following requirements:

### **A. Inventory Requirements**

Each facility must develop and update annually, as appropriate, an inventory which includes, at a minimum, the following:

#### **1. List Source Materials**

Make list of source materials that have been used, loaded/unloaded, stored, treated, spilled, leaked and/or disposed onsite in a manner to allow exposure to stormwater; and

#### **2. List Sources of Water**

Make list of any domestic wastewater, non-contact cooling water, or process waste water (see definitions in Part IV of permit), that is generated at the facility and discharged through separate storm sewers (see definition in Part IV of permit) to surface waters.

#### **3. List Permits**

Make list of any current NJPDES (New Jersey Pollutant Discharge Elimination System) permits or permit application that the facility may have for such discharges.

### **B. Drainage Control Plan Narrative & Mapping Requirements**

Refer to Part IV Section B, *Drainage Control Plan*, of this permit.

## **V. Best Management Practices (BMP) Selection and Description**

The SPPP shall describe the BMPs used to prevent or minimize pollution from source materials and areas of industrial activity. The permittee shall evaluate the information from the site assessment phase of this plan to identify potential and existing sources of stormwater contaminated by source material. **All non-stormwater discharges to surface water and/or groundwater must be eliminated or permitted.** The permittee shall design, implement and maintain BMPs to meet **design criteria and effluent limits** specified in this permit. Based upon the site assessment performed, the permittee shall develop BMPs that will effectively eliminate or reduce pollutant loadings in stormwater discharges from the facility

in accordance with the following sections. The evaluation and selection of the BMPs shall address each area, and/or activity where source materials are exposed to stormwater discharging to surface water.

## **A. Pollution Prevention**

All contact of source materials and industrial activities with stormwater shall be prevented and/or minimized. Each BMP that is used to minimize and/or prevent such contact shall be identified and discussed in the SPPP.

### **1. Diverting Stormwater**

Approved diversion of contaminated stormwater to either a domestic or industrial wastewater treatment plant may also be considered when choosing an appropriate BMP where feasible. (Diversion to groundwater may require additional Department approval, or modification to this permit. Contact the Bureau of Nonpoint Pollution Control if a discharge to groundwater is being considered.)

### **2. Good Housekeeping**

The SPPP must include a good housekeeping program to help maintain a clean and orderly work place. For certain activities or areas, contact of source materials with stormwater may be prevented and/or minimized merely by using good housekeeping methods. The following are some simple procedures that a facility can consider incorporating into an effective good housekeeping program:

- conduct cleanup immediately after discovery of leaks and spills;
- implement careful material storage practices;
- improve operation and maintenance of industrial machinery and processes;
- maintain up-to-date material inventory;
- maintain well organized work areas;
- provide regular pickup and disposal of waste materials;
- maintain dry and clean floors and ground surfaces by using brooms, shovels, vacuum cleaners, or cleaning machines; and
- train employees about good housekeeping practices.

### **3. Spill Prevention and Response**

Specific spill prevention and response procedures shall be developed. The procedures shall include material handling, storage and equipment operation and maintenance requirements used to prevent and/or eliminate spills and/or leaks. A valid SPCC or DPCC shall satisfy this requirement provided the plan includes spill prevention/cleanup for all site chemicals, wastewater and raw materials.

The permittee shall develop and implement a Spill Prevention Plan. At a minimum, the Plan shall include:

- Spill Response Coordinator
- Procedures for preventing and/or cleaning up spills
- List of available spill cleanup materials, including brooms, shovels, absorbents, heavy equipment, containers, etc. (The list should include normal level of inventory that will be kept onsite).
- Description of employee training, including:
  - Location of spill cleanup materials, containers and equipment
  - Procedures for preventing and/or cleaning up spills
  - Company Spill Response Coordinator (the coordinator can be listed by Title, such as, Plant Manager)
  - List of emergency phone numbers
- Description of routine inspections for spills, leaks, damage to containment and spill structures. Inspections are recommended to be done weekly.
- Routine inventory of spill cleanup materials and equipment.

### **4. Site Stabilization and Dust Control**

The SPPP shall include standards for site stabilization and dust control designed to prevent transport of particulate and sediment from areas devoid of vegetation and to prevent downstream soil erosion caused by routine operations and uncontrolled stormwater runoff. At a minimum the standards shall meet the technical standards found in *the Standards for Soil and Erosion and Sediment Control in New Jersey* and shall include:

- traffic control to prevent or minimize disturbance of unstabilized areas and to prevent disturbance of vegetative covers and/or other dust control mechanisms
- entrance/exit stabilization to prevent or minimize transport of sediment and dust outside the site property line
- dust control to prevent or minimize movement of dust and sediment from exposed soil areas

### **5. Erosion Control at the Outfalls**

The permittee shall inventory all outfall structures that are used to convey and discharge stormwater. Stormwater velocity at the outfalls shall be controlled to prevent downstream erosion and/or degradation and ensure stabilization.

- All work shall be accomplished in accordance with applicable State, Federal, and local approvals.
- The permittee shall design, implement and maintain BMPs to prevent downstream erosion and sedimentation caused by stormwater, mine dewatering and/or process wastewater runoff at the outfall(s).
- At a minimum, the BMPs shall meet the most recent technical standards listed in Standards for Soil Erosion and Sediment Control in New Jersey, Engineering Standards Section titled Standard for Off-Site Stability.
- The permittee shall repair and maintain the erosion controls and shall restore the eroded areas to its previous condition.
- The permittee shall include a narrative of stormwater runoff control and list of BMPs in the site SPPP.

## 6. Preventative Maintenance

The SPPP shall include a Preventative Maintenance Program to include timely and regular inspections and maintenance of stormwater management devices (e.g., cleaning oil/water separators, catch basins, drip pans, catch basins, detention basins, covers, treatment units) and routine inspections of facility equipment and operations to detect faulty equipment. Equipment (such as tanks, piping, containers, and drums) should be checked regularly for signs of deterioration.

## 7. Engineered Treatment Systems

If the permittee implements specific BMPs to minimize or eliminate specific pollutants and discovers that the BMPs continue to be ineffective, then the permittee will need to consider an engineered treatment system. Treatment systems may require additional permitting from NJDEP.

Stormwater treatment systems that are **verified** by NJCAT (<http://www.njcat.org/>) and **certified** by NJDEP maybe considered to meet permit requirements. But site specific applications needs to be evaluated before installing any system. The permittee should contact the Department's permitting case manager prior to purchasing and installing an engineered treatment system.

## VI. Implementation Schedule

The SPPP shall include an implementation schedule for all structural and non-structural BMP's including a schedule(s) for removal, coverage, minimization of exposure of source material to stormwater, and/or stormwater diversion or treatment. The schedule shall meet the deadlines established in the permit in accordance with Part IV.

Upon completion of the initial SPPP, those BMP's (e.g., spill response, good housekeeping) that may readily be implemented as specified in Part IV of the permit, shall be done so within 30 days, if not already practiced.

## **VII. General Plan Requirements**

This section provides additional requirements on the administrative requirements related to finalizing your SPPP. It covers (1) required certifications, (2) required signatures, and (3) requirements for plan location and access

### **A. Certification of Stormwater Pollution Prevention Plan**

#### **1. The SPPP**

The SPPP preparation, implementation, and annual recertification shall be certified in accordance with Part IV on the appropriate form provided by the Department.

### **B. Required Signatures for SPPP and Certifications**

The SPPP and Certifications shall be signed as follows:

**For a corporation:** A president, secretary, treasurer or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision making functions for the corporation; or the manager of one or more manufacturing, production, or operating facilities, provided:

- (1) The manager is authorized to make management decisions that govern the operation of the regulated facility, including having the explicit or implicit duty of recommending major capital investment, initiating and directing comprehensive measures to assure long term compliance with environmental laws and regulations, and ensuring that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; or
- (2) The authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

**For a partnership or sole proprietorship:** A general partner or the proprietor

**For a government agency:** A ranking elected official; or the chief executive officer of the agency; or a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrator); or **duly authorized representative** as defined in N.J.A.C. 7:14A - 4.9 (b).

Whenever there are two or more permittees for the facility, all of those permittees shall jointly submit this Certification, unless permittees received authorization on different dates and this Certification is therefore due from them at different dates.

## **C. Plan Location and Public Access**

### **1. SPPP Records**

The SPPP and inspection and preventative maintenance records or logs shall be maintained on site at all times. These documents must be made available, upon request, to a representative of the Department and to the owner and operator of any municipal separate storm sewer receiving the stormwater discharge.

### **2. Make Available to the Public**

The SPPP shall be made available to the public upon request. The facility may claim any portion of the SPPP as confidential in accordance with the provisions set forth in N.J.A.C. 7:14A-18.2.

### **3. Submit a Copy of the SPPP**

A copy of the SPPP shall be submitted to the appropriate Regional Bureau of Water Compliance and Enforcement and to the Bureau of Nonpoint Pollution Control. Revisions made to the facility's SPPP shall be submitted also

### **4. Inspections and Annual Reports**

#### **- Regular Inspections**

The SPPP shall establish a schedule for regular inspections as required in Part IV Section F of the permit. Regular inspections shall include inspections of the facility's equipment, exposed source materials and industrial areas to ensure that all elements of the SPPP are in place and working properly. Inspections shall be conducted by qualified, trained plant personnel. Records of these inspections shall be kept onsite with the SPPP. At a minimum, these inspection records shall consist of the following:

- date of inspection;
- location of and problem(s) identified;
- steps taken to correct problem(s) and prevent recurrence; and
- inspector's name and title.

In addition these inspection records shall record any incidents such as leaks or accidental discharges, and any failures or breakdowns of structural BMPs.

#### **- Annual Inspections**

Conduct annual inspections as required in Part IV Section F of the permit. The annual inspections are necessary to evaluate the implementation of the SPPP for preparation of the annual report and annual certifications.

- Annual Reports

The SPPP shall include a method to routinely and continually evaluate the SPPP for effectiveness, any flaws that may have developed, and maintenance that may be required. The routine evaluation must include, but not be limited to:

- Regular and annual inspections
- Inspection logs and records
- Internal reporting
- Plan revisions to correct any flaws detected in the SPPP or to reflect changes/additions at the facility
- Logs of preventative maintenance performed at the facility.

## **VIII. Special Requirements**

### **A. Facilities Subject to Emergency Planning and Community Right-to-Know Statute**

For facilities subject to the Emergency Planning and Community Right-to-Know Act (EPCRA) Section 313, the SPPP shall include, or cite the location of, any spill reports prepared under that Act.

### **B. Facilities with SPCC Plans, DPCC Plans, or DCR Plans**

The SPPP shall include, or cite the location(s) of, any Spill Prevention Control and Countermeasure Plan (SPCC Plan) prepared under 40 CFR 112 and section 311 of the Clean Water Act, 33 U.S.C. §1321; and any discharge prevention, containment and countermeasure plan (DPCC plan) and discharge cleanup and removal plan (DCR plan) prepared under N.J.A.C. 7:1E.

### **C. Facilities Undergoing Construction Activities**

Whenever construction activities are undertaken at the facility, the SPPP shall be amended, if necessary, so that the SPPP continues to be accurate and to meet the requirements of Part I of this permit.